



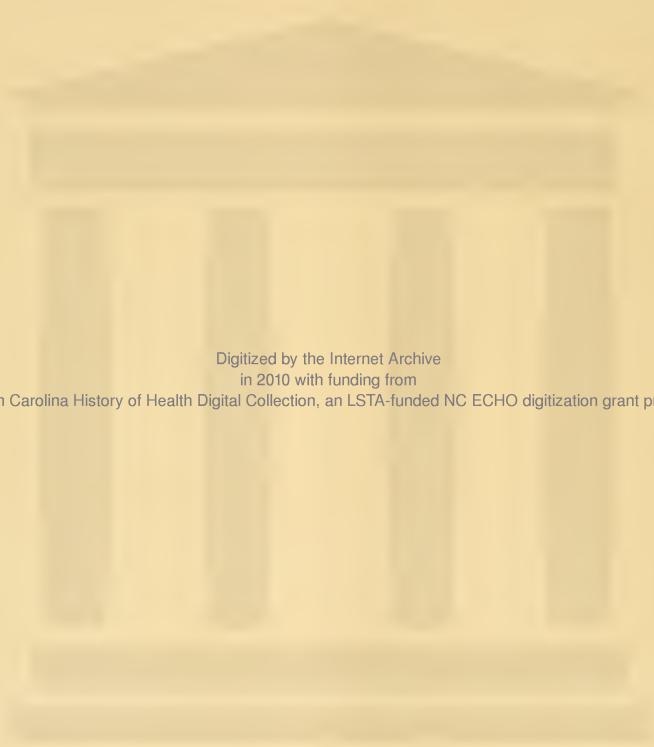
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The Charlotte Medical Journal

VOL. LXXX

CHARLOTTE, N. C., JULY, 1919.

No. 1

SOME SCATTERING REMARKS ON OBSTETRICS WITH REPORT OF THREE CASES OF RUPTURE OF UTERUS.*

By N. C. Hunter, M. D., Laurinburg, N. C.

Ladies and Gentlemen of the Society:

As you will doubtless soon conclude, I am no obstetrician, but I am compelled to do a certain amount of midwifery in a general scramble for a living.

I suppose I shall have to excuse Dr. Alexander for requesting a paper on this subject from me, since it is a fair supposition that the doctor who stayed off the firing line had only to "Caper nimbly in a lady's chamber" as occasion required and the chase after sore toes and stomach aches permitted.

To many the general part of my paper may be uninteresting but to the beginners it may appeal since the practice of obstetrics is one of the great avenues to fortune, not only in itself but he who attends the expectant mother in her travail and ushers into this mixed existence a new bunch of possibilities in which she sees the fruition of her hopes, he establishes a reputation reaching through all the toilsome maze of a general practice, and becomes at once initiated into all those poor, simple human secrets which are spoken only in low tones and reluctantly by the female patient to her physician.

The three cases reported have interested me in many ways and you shall have them for what they are worth.

My subject is general, a fortunate circumstance, which gives me opportunity to travel well marked highways and leaves dim roads and short-cuts for better guides in discussion.

May I not begin by congratulating womankind and the profession on the rapidly decreasing popularity of alcohol as a satellite of labor? however brought about. You all, or nearly all, remember when no approaching birth was regarded as provided for without a quart of liquor; you also have observed that "When the wienie sees the light it makes the gossips chatter bright," allowing it didn't lay the old man up in the

barn or worse—in the lyin-in chamber, till the storm was over, or incite him to violence against his erstwhile friends. Fortunately the patient rarely got much of it, that made her vomit and rarely did good so far as I have observed.

I do recall one woman who drank a half pint straight and at once proceeded to do her duty, suffering no visible ill-effects. She was an exception and probably a toper.

To my mind however a very few conditions may arise in the ten months of a woman's life when she should be under the eye of an obstetrician, which may be benefited by a carefully selected and used preparation of alcohol; but these conditions are not essentially concomitant with the period under consideration.

To the sway once held by alcohol in the sacred realm of maternity I think memory need raise no trophies, except perhaps, such as genius may weave into the fabric of historic fiction along with the "groaning ale" of moated castles and the long green bottle of *Oliver Twist*.

Let's follow this subject of obstetrics with the candidate—she is married, maybe not; she is sick—maybe not; she vomits, tries to or feels like it, at the most inconvenient times or places perhaps—what will you do for her? Comfort her, feed her and look to her general health.

She vomits all or nearly all of her food, she emaciates, she weakens, her temperature gets up a little and stays up and her pulse goes to an hundred or more? Get busy. Try the conservative remedies, not too long; dilate the cervix, cauterize it, empty the uterus and don't be too slow about it. I have seen life lost by neglect; I have seen it barely saved after procrastination, and I have seen much good and no evil follow prompt radical treatment. just five remarks:

1st. A simple vaginal examination rarely but surely cures some.

2nd. When you dilate and curette the uterus you will find it soft and flabby—better tampon cervix and vagina for twenty-four or forty-eight hours to dilate cervix and irritate the uterus to contraction; you may thus cure your patient and will surely make operation easier and safer.

3rd. You can not take the patient's word without circumspection; a nauseat-

*Read before the recent meeting of the North Carolina Medical Society at Pinehurst.

ed, pregnant woman feels like she vomits everything and then some.

4th. The patient with hyperemesis is drying up, she absorbs fluids readily by the rectum, both food and stimulants; she cannot throw up a hypodermic.

5th. Normal pregnancy is not the only cause of nausea or even of hyperemesis and it confers no immunity, not even against additions in kind, contemporary or subsequent, either in loco naturalis or extra uterine. She gets well, possibly only partially so or was never sick? Keep her well or prevent her from getting sick-er.

You will not neglect her diet, her habits, or her spirits. The working woman does better than the indolent one. The diet with a spare nitrogen content may be safe but it is not sufficient. Nothing is too bright or cheerful for the woman burdened with the service and creation of man. If she has had hyperemesis you will be especially watchful for chorea and the mental ailments of pregnancy. To insure emptying the breasts after delivery you must see that the nipples are developed and to provide for the burden of a double circulation and elimination you may well, in most cases, give *Cr. Tartar* and *digitalis* in the last weeks of pregnancy—indeed I regard this as essential in many cases even with no albuminuria or heart murmurs. Get hold of her as soon as you can and don't let her go until after the puerperium and then examine her for retroversion of the uterus.

With all the emphasis I can command—the attention the pregnant woman receives from conception to labor is much more important than that she receives at normal labor, even with the puerperium counted with the latter; indeed, as I have often remarked, all the doctors for ten miles around can not stop labor but almost any with reasonable qualifications and attentiveness can bring the woman safely to it or save her before term.

She develops nephritis. Now I regard nephritis incident to pregnancy as a condition secondary to the presence in the blood of certain poisonous and very irritating acid substances occupying a morphological chemical position between albumins and urea.

I think the substances, as other and better known irritants sometimes present in the blood, cause first a congestion with albuminuria then inflammation in varying degree in the excreting structure of the kidney with resultant diminished excretion; I believe less urea is ex-

creted because less is formed and that it is not the retention of the urea which produce the toxic symptoms but the retention of the morphologically imperfect compounds precedent thereto, and that the quantity of the urea excreted is generally an inverse index to the quantity of its antecedent in the blood, this substance is only excreted sparingly by the kidneys before they are damaged by it and after they are inflamed hardly at all.

Now the ureamia, so called, is not so much a result of the nephritis as it is a concomitant, both are caused by the circulation in the blood of a poison accumulated there either because oxidation and the manufacture of urea are not up to standard or because the quantity is beyond the normal metabolic capacity, or both, and perhaps too, because elimination by the intestinal glands and liver is impaired. Evidence supporting this theory is furnished by the occurrence of severe uremic symptoms without albuminuria and even with a normal or nearly normal output of urea from the kidneys.

At any rate we know that the medicines which stimulate the liver and intestinal glands cause the maximum elimination and afford the best drug treatment; I can not forbear to mention the value of calomel in urgent cases, perhaps combined with other quick acting purgatives, but never replaced by them, in the less urgent cases *pot. bitart.* has appeared to me more valuable than anything else and I believe that, in common with other vegetable salts of the alkalies, it has a chemical antidotal effect on the poison in the blood that produces nephritis and ureamia.

Now it must appear that the most rational drug treatment is that which will cause the maximum elimination without increasing the embarrassment of the disabled renal structure as is done by the cardio-vascular diuretics and the genito-urinary stimulants and irritants. *Pilocarpine* is much commended.

The hot-pack is certainly valuable in all the stages and complication of nephritis, the use of fluids must be subject to judgment; if elimination by the bowels is active there will be thirst and fluids may be given very freely, otherwise there is danger of overloading the blood vessels and heart and increasing the embarrassment of the kidneys. Until metabolism and elimination of the nitrogen compounds return to normal the diet must make allowance therefor and such articles as seem to assist these functions may

form a goodly part of it, namely, grapes, apples, lemons, oranges, and some green vegetables; so far as I know fats are harmless but the minimum of salt should be allowed even that in the butter; in the less acute cases and after the bowels are gotten and kept active digitalis and spartein may prove of great service especially when the heart is damaged or weak; as a chalybeate nothing surpasses the old Bashams mixture.

She has been neglected and has convulsions or coma—you have before you only the full picture at the shadow of which you have been looking. Another position is stormed by this insidious enemy of cell life; the poison in the blood has assailed the delicate and sensitive nerve cells of the brain and cord as it did the epithelium of the kidney, the liver, and the intestine, and as the havoc is greater in proportion to the weakness of the ranks assailed the louder will be the cry for help—you have only a few reserves and the outcome hangs in the balance; the last natural fortress may fall with oedema of the lungs and its direct antecedent, oedema of the brain, at any time. What will you do? You may eliminate the quickest and surest way and reduce the B. P. along with it; bleed promptly but not excessively; it has occurred to me that if a corresponding quantity of neutral alk. carb. solution to the blood first drawn be introduced into the circulation, a second portion of blood equal to the first might advantageously be taken thereby doubling the rapid elimination without dangerously reducing the volume of the circulating fluid. I have not tried it but believe it might do well in an emergency.

Purge her quickly, the reason is obvious—by diminishing the fluid in the vessels an exosmosis from the preicellular spaces is set up and the poison thereby drained away into the capillaries and more slowly replaced by less toxic fluid after some degree of elimination has been achieved and metabolism is approaching normal.

There are a few drugs which have an established reputation in treatment of this condition.

Morphia and chlortal belong to the class of symptom medicines and act by physiologically counteracting the effects of the poison on the nerve cell protoplasm; while this may be of much value while elimination is being promoted, or naturally taking place as in milder cases, if these drugs are not used with a cor-

rect appreciation of their action their use may lead to grave errors, opium especially, while retarding absorption by the sensitive cells, retards elimination; it directly inhibits all phases of protoplasmic activity, and while in this condition the cell may be done to death unless prompt measures are taken to prevent it.

Atropin has been used with much success in pulmonary oedema and I am enthusiastic for its opposite, adrenalin, but I fear that it is only in the oedema of a failing heart that they are useful, whereas I regard the pulmonary oedema of eclampsia as secondary to grave lesions in the nerve centers, just as it is in brain trauma, but where there is cardiac and vascular primary cause I am satisfied of their merit, especially of adrenalin.

I am disposed to think well of veratrum but my experience with it has been small and not very well studied.

I may sum up, that the first principle in treating all systemic poisons is elimination, and remedies designed for any other purpose must here take a second place.

Evacuation of the uterus is regarded as essential in the treatment of urgent uræmic symptoms.

I cannot say that my experience has been encouraging but all the cases in which I have seen it used or used it have been in very grave condition. I believe, however, that it is a legitimate and hopeful practice and like most other radical measures should more frequently be used early.

Where the condition of the bony or soft parts is forbidding, especially in early eclampsia where it would be impossible to deliver through the cervix and in elderly primiparae, Caesarian section now commands itself with much force to the thoughtful.

Concluding this subject—not one in the list of obstetrics pleads louder for early medical attention and the doctor who gets his cases early and looks after them will rarely in his own practice be confronted with the life-shortening proposition here presented.

She bleeds before the eighth week. More commonly than once supposed it is ectopic gestation—you can not afford to forget this. I recall two cases only in my own practice where diagnosis was confirmed by operation and gross or microscopic findings; both were in the same patient and the first was diagnosed before rupture. It occurred several years

after abdominal section, supposedly for retroversion of the uterus.

The second followed the first in about three years and ruptured before I saw it. Though promptly diagnosed and placed in hospital under a competent surgeon the woman almost lost her life from recurrent hemorrhage before operation.

The second case, seen in consultation, was regarded as an abortion though ectopic was considered, and the error was not detected until intrauterine examination proved the uterus empty, then the abdomen was opened.

The third case, seen in consultation, had been taken to hospital, curetted and sent home.

Abdominal section revealed the tube ruptured into the broad ligament producing a small haematocoele.

All three patients recovered; all three were nuliperae—one had had two previous abdominal operations, two had had one, and one none.

I think I have seen several cases which recovered, more or less crippled, without operation.

The collapse, and it certainly is not always present, is due more to shock than to hemorrhage.

She bleeds from the second to the sixth month? Ninety-nine times out of one hundred it is a beginning abortion; no living physician can tell how much of this the foetus can survive.

The time-honored opium meets all indications as a sedative but may, in some cases where it must be given by mouth, be combined with bromides or chloral—an opium suppository often acts splendidly. Over the next most important thing, rest, the doctor unfortunately has less control.

Specific treatment is here as elsewhere demanded when a specific cause is present.

In unavoidable miscarriage my experience and observation convinces me that early, clean, and thorough instrumental removal of the ovum or its remnants gives by far the most uniform, prompt, and satisfactory results. Need I caution you to have a reliable assistant? So long as all goes well all is well but in the case of accidents, erroneous impressions, or malicious motives you may rue the day you spared expense or sought to hold your client's confidence by trying to be the whole thing. In this as in all our practices we should always bear in mind the great variety of people we must work for and the increasing education, not all good, and the exacting vigilance now common

to every clientele. A well applied tampon or Barnes' bag, or both in cases that are not promptly curetted but abortion is practically sure, will make you sleep better.

She bleeds from the seventh to the ninth month. It is most likely accidental hemorrhage—tampon and deliver quickly—rarely is it placenta p. I have had no case in my own practice; in one case I saw in consultation, which was in reality a miscarriage between the sixth and seventh months, the placenta was nearly expelled into the vagina and the child was across the uterus, delivery was easy and hemorrhage slight; two other cases were seen in consultation and of one other case I have intimate knowledge, mother and child were saved in all three.

She is supposed to be at term but does not labor. Let her alone except to examine her, she may not be pregnant.

She is at or near term and has pains? Now you should have examined her several days before to have determined the presentation. Before doing this at any time near labor she should have had the vulva thoroughly cleansed with a liquid antiseptic soap and the hair clipped short; a rinsing with bichloride solution, one to four thousand, and a vaginal douche of the same is a safe and reasonable practice; her bowels should have moved before the bath, preferably by an enemina—no matter how well the woman may have been cleaned up the accoucheur may be and usually is dirty and he must remember it.

A neglect of this toilet may bring the woman to the surgeon later if it does not do her more harm quickly than the attentions of the doctor do her good.

The parturient woman does not get the kind of toilet she needs because ignorance, superstition, false modesty, and laziness stand in the way. She herself, those at home who should bear a responsible relation to her, and I regret to say, the buttermilk doctors who thrive in this climate are all to blame.

A few points I will mention: A liquid antiseptic soap that always comes clean, and see that it is used.

I strongly object to all p. p. douches except in septic cases or for hemorrhage and the latter very rarely.

Nothing should be dragged from the anus to the vulva.

A simple device for keeping the bed clean but one very difficult for the nurse and patient to understand is to put the protecting material all on top of the bot-

tom sheet where it can be easily removed and replaced with something clean.

I prefer the chamber to the bed-pan but during labor and one week after, it should be kept above suspicion and liberally rinsed with that rare fluid, boiling water; if the chamber is put in the bed it should be wrapped up and placed on a newspaper if nothing better is at hand. A clean napkin should be constantly worn—better an antiseptic one. In bathing the water should be drained from before backward. The pains are slow? The less active measures and medicines fail. Try ergot or pituitrin, they act alike only the latter is faster and more powerful—a wonderful drug indeed. The one indication for them both is uterine inertia and the one forbidding circumstance dystochia from any cause.

As to pituitrin, its mode of action bespeaks its dangers and its faults are but its virtues in excess.

As to ergot, no drug has been more maligned; it very rarely if ever causes tonic contraction; it is a slow and rather uncertain oxytoxic but sometimes a very effective one. It is not useful after labor because it increases the flow by augmenting periodic contraction and increases after pains the same way. I say this from conviction well knowing I am speaking counter to written and rewritten law. The early use of pituitrin before it is certain that the head may rapidly and safely descend, before the naturally well-timed mechanism of labor and adjustment of the parts concerned permit, is not only unwise, it is criminal and he who indulges in the practice will sooner or later pay the price even if his conscience must be the only collector.

The pains are regular, strong, and long—give her one-fourth grain morphine by mouth if she suffers overmuch, nothing does so much good and nothing nearly so effective does so little harm; its effect is slow in onset and prolonged in action and the woman will be left in better shape at the distressing and anxious period just following delivery. The doctor who will not occasionally dull the keen anguish of labor with a little morphine is not a Christian.

The head is bulging the perineum and the pains are vigorous and regular? Give her a long whiff of chloroform at the gathering of each pain to prevent rapid expulsion and limit the chance or extent of perineal rupture as well as dull the pain. As the head emerges give her all she wants. The objections are rather

more hemorrhage than normal, the child is partially anaesthetized, labor may be arrested before extrusion of the shoulders and the mother is left dazed, crazed, and uncomfortable.

The babe is born. Appear visions of the blind asylum, courts of justice both criminal and civil, jails, the bureau of vital statistics, and the State Board of Health, a great white throne and the secretary seated thereon, clothed in robes of majesty and power; on his brow is a crown of fine brass and his sandals are of soft wool such as is seen in kings' houses, so that his feet are not defiled by the earth on which tread ordinary doctors; his countenance is radiant with the consciousness of worth and in his eyes slumber the fires of righteous anger; in his left hand he holds his pay envelope and in his right he twirls a big stick, while open before him is a great book of rules, filled with leaves, which shall be for the healing of the nation before it gets sick and even after; dimly also, perhaps, the tired physician sees at the end of a long, rough, and winding road the hazy outline of the melancholy edifices that made Morganton and Dix Hill famous.

By a fortunate though not unusual exertion of nature the secundines are expelled in toto, she rests a little and the essential parts of her toilet are carefully, rapidly, and quietly remade and her bedding changed or readjusted—one remark, it has been said that the fate of the wounded soldier lies in the hands of him who applies the first dressing. Let me beg the inclusion of the exhausted, wounded, recently-delivered woman.

She sleeps, as I fear my audience may, and though she is just entering a period of many perils and the responsibility is now for two instead of one. I leave her, while she is grateful and her family is happy and the memory of past pains is lost in present pleasures and future hopes. May she awake under the hand and eye of a worthy accoucheur from whom we may hear later.

I shall not burden you with the text or recent reviews on rupture of the uterus or my own opinions thereon. I should very much like to hear a free discussion and am sure you are entitled to be heard some *for* ourselves.

Report of Cases.

About seven years ago I was called early at night to see a multiparous negro woman in a crowded, squalid cabin in the red hills near the Pee Dee river.

She had been in hard labor for several

hours and when I reached her she was making the most of her still vigorous pains. The child's hand and forearm protruded from the vulva and the shoulder almost filled the pelvis. Her pulse was good and she seemed in surprisingly good shape generally.

I had another physician with me as I was looking for trouble. The choice appeared to be between version and morcelation of the child and I proceeded with the version, using all the care possible as the waters had all escaped and the uterus never relaxed much.

Reposition was very difficult but this accomplished delivery by podalic version was fairly easy but the baby was dead; its shoulder elongated, body bent and neck stretched to twice its natural length. The placenta was scooped out with the hand and then appeared something that had an ominous slick feel which made me halt and consider. I followed it up and found it to be the small intestine protruding through a rent extending for about four inches through the vaginal fornix and a little beyond the internal os on the left side. We gave the woman some morphine and ergot and put her to bed with hips elevated and next morning sewed up the rent through the vagina leaving a good sized tube between two of the stitches.

There never was any excessive external bleeding; the tube was expelled in about two days and the wound healed promptly; the woman's condition appeared to become very serious, the abdomen bloated, she had some fever and much vomiting and her pulse became small and rapid.

Her attendants lost confidence in her doctors I think for they ceased attempting to carry out their directions and greased her from head to foot with lard and tar, after which she must have "made an uneventful recovery" for she was about her usual place and duties in about three weeks.

I was called to see the second case in consultation with an intelligent negro doctor. The woman was a multipara and gave no history of previous trouble at labor. I got from her doctor that she had been in labor something like twelve hours, the pains had never been at all hard and she had gradually become weak and sleepy and the pains entirely ceased and also that she had been given neither ergot or pituitrin. She was rather apathetic and her pulse was weak and rapid, abdominal palpation revealed general ten-

ing in front of the uterus in the hypogastrium, a condition rare but sometimes present in health. There was nothing else unusual unless that the head was not fixed at the brim.

Vaginal examination revealed the cervix widely dilated; the head freely movable at the brain and a soft mass lying by and about it. During the examination as during all subsequent manipulations much dark and partially clotted blood and perhaps other fluid escaped from the vagina. I suspected rupture but more strongly placenta p. and sent for an esteemed colleague and we decided to turn. I passed my hand along the child's belly and turned with little difficulty but found a very strange feeling lot of membrane about the child; however I kept my hand busy with the child and did not then investigate its envelope; the head became extended at the brim and as it seemed I could not extract it. I tried to apply the forceps but failed; I was very careful with the forceps and feel sure I did no harm; finally by compressing the head all I could with my hand and continued effort I succeeded in delivery.

I then removed the placenta which was detached and shrunken and lay in the lower segment and vagina.

On passing my hand up further it went through a broad transverse rend in the back of the lower segment and behind the fundus which was firmly contracted.

The child appeared to have been dead for some hours; the woman was now extremely weak and apathetic and never rallied sufficiently to justify operation. There was very little fresh external bleeding.

The third and last case was seen in consultation with a colleague and was that of a rather fat and healthy looking white woman, the mother of six children. From her doctor I got this information, and I am sure he is a very careful and conscientious man. She had been in labor five or six hours and the pains had been only fairly strong. About an hour before they had altogether ceased, he had given her, then, a dose of pituitrin without bringing on any pains; then he had introduced the forceps but found it impossible to lock them and at that time called me to see the case.

I found the woman quiet and disposed to sleep but anxious for something to be done; the pulse was rather quick and fast and of low tension. Abdominal palpation revealed the shape of child with unusual clearness. Vaginal examination showed

derness, no rigidity, and the intestines ly- the head firmly engaged, thus accounting for the absence of a classical symptom her attendant had needed to guide him; with little it appeared to direct us except the inertia we decided to give another dose of pituitrin; on retiring a few minutes after this it dawned on us that the child was out of the uterus and we went back and satisfied ourselves of this sad state of affairs, and I want to tell you that in palpating abdomens for twenty years I never felt anything more shockingly plain than I did that dead baby, from its neck to its soles.

It lay laterally in the abdomen with its legs and thighs drawn up. It was now apparent that the mother was growing weaker and the pituitrin seemed to be without effect.

A surgeon was called and in about two hours from the time I saw the woman, got the abdomen open, extracted the placenta, lots of clots, and the child from the abdomen, the last with much difficulty as its head was firmly engaged in the pelvis.

The rent was across the anterior-lateral part of the lower segment and very large. The woman almost expired on the table but rallied a little when put to bed and lived from completion of operation at about three a. m. till about 8 p. m.

She presented a striking picture of severe secondary anemia with a flickering pulse, breathlessness, cutaneous anaesthesia, and almost complete paralysis of the legs, and with all this she was rather talkative and her mind remained clear nearly to the close.

Cod Liver Oil for the School Child.

Many a child working hard at his usual school tasks shows a tendency to lose weight and with it aptitude for his work. In such cases no better agent offers itself than cod liver oil, and if it can be given in a palatable form, it affords a most successful means of aiding to the richness of the blood-stream and increasing the child's strength.

For the purpose Cord. Ext. Ol. Morrhuac Comp. (Hagee) has held high favor for many years, and it may be given to this class of partially debilitated children with every expectation of the best of results. Cord. Ext. Ol. Morrhuac Comp. (Hagee) contains the essential properties of cod liver oil and since it is palatable and will not disturb the stomach, it may be continued for long periods without causing distress.

ARRANGEMENTS MADE BY GUILFORD COUNTY FOR FURNISHING ITS CITIZENS DIPHTHERIA ANTI-TOXIN.

By William M. Jones, M. D., Greensboro, N. C.

We are living in a fast and wonderful age, and everything is progressing so rapidly that we are liable to lose sight of details in our mad scramble for statistical results. What does it amount to if you vaccinate six hundred persons in one day and only have a very few successful takes, so long as your records show that you have done this; or what does it amount to, if you have held twenty meetings, made talks to four thousand people, so long as your reports show that you have done that amount of work.

What really counts is not what quantity of work has been done, but the quality of the work. It is a good plan to make haste slowly, and as Davie Crockett said: "Be sure you are right, then go ahead." Have a definite object for everything you do, for you are going to accomplish little by going for the mass. The old saying: "Take care of the pennies and the dollars will take care of themselves," may very aptly be applied to health work.

The State Board of Health has gradually been placing in our hands necessary defensive measures for the purpose of increasing the value of our work, and as we have progressed in our armaments, so *pari passu* have these armaments progressed, and it is up to us to keep abreast of the implements at our disposal. We were given first a very simple weapon in Small Pox Vaccine, the administration and care of which did require but little thought, and from this to Typhoid Vaccine, and finally to Diphtheria Anti-Toxin. In this last we have been given a more complicated weapon and one that cannot be carelessly handled, and by which any act of omission upon our part may result in serious consequences.

I have heard physicians condemn the Typhoid Vaccine as furnished by the State Laboratory, saying: "It was no good, that they did not get any reaction, etc." Upon investigation it was found that they had received the vaccine and had placed it on their desk or a table in their office where it was allowed to stand not for days, but weeks, at a temperature of from 85 to 95 F. and for a time each day exposed to the direct rays of the sun.

Every package I have received has always been plainly marked, "Keep in the

Ice Box." Now, is there any wonder that they did not get a reaction. To fail to get results from Typhoid or Small Pox Vaccine is not such a serious matter for the chances are at least an even break, but when we are giving Anti-Toxin, we are not doing so for its immunizing effects but for its curative, and to fail to get what may rightly be expected in a serious matter, for you have put a life in jeopardy. You can work a bluff with man, but do not think that you can put anything over on Diphtheria.

So be sure that your Anti-Toxin is potent, and there is no way to be sure unless you follow the instructions to keep in an ice box. Know for a certainty that it has been so kept since the day upon which you received it.

There are certain druggists in every county who will be delighted to know of the failure of anything that cuts them out of a profit no matter how small, and if you do not use scrupulous care, you are going to have a case where it is going to fail. When this happens, you will not get anybody in that particular community to again use the State's Anti-Toxin for a long time. So whatever you do, do not play fast and loose in the care of the Anti-Toxin that has been furnished you. To do so, is simply courting disaster which is certain to come. As I see the situation, there is but one necessary and simple thing to do. It is, of course, important to have the Anti-Toxin in easy reach of as large percent of the population as possible, but ease of access is only a secondary consideration to having it potent. I have, therefore, only four (4) rules in regards to the handling of Anti-Toxin and the first is:

1. Keep it cool.
2. Keep it cool.
3. Keep it cool.
4. Have it at various locations in the county where you know that the first three rules will be carried out.

F. M. Bell, head of Armour and Company's pharmaceutical department, sailed recently for Europe where he will study business conditions and get an inside viewpoint of the general pharmaceutical activities in foreign countries. Mr. Bell's visit which will last approximately two months will include trips through England, France and Italy.

Armour and Company's line of pharmaceutical goods which is well known in medical circles has been under the direction of Mr. Bell for many years.

UNIFICATION OF NURSING ACTIVITIES UNDER HEALTH DEPARTMENTS.*

By Chas. E. Low, M. D., Wilmington, N. C.

It is safe to assume that public health nursing is now considered an indispensable part of any well organized public health movement. That such is true is borne out by the fact that many communities which lack anything like a well organized health department, have already established some form of nursing service. The result obtained from that service must depend upon many factors such as the size of the community in comparison with the nursing force; the financial and moral support which the community gives whatever nursing force it has; the personnel of the force itself and the character of the organization which directs it.

Public health nursing is relatively a new field of endeavor in which the supply of properly trained workers is not yet equal to the demand. It therefore becomes necessary to employ nurses without special training for the work. Wherever possible, however, graduate nurses only should be so employed.

The work is quite different from that embraced in private or institutional nursing and requires for success not only a broad understanding of human nature, with tactful adaptability to human frailties, but also many of the qualities to be found only in the successful teacher.

The problem of the administrator of public health work is to sift out the essential scientific principles which have the greatest bearing on the conservation of public health and get them presented in intelligible or usable form to his constituency.

It is my firm conviction that this can be efficiently done only through personal demonstration and contact with those whom you wish to reach.

The printed word is educational and not to be neglected, but for results give me the element of personality and the human voice and hand. Grown people are much like children save that perhaps they are more difficult to teach and we certainly would not think of teaching children by books alone.

From the very nature of their work public health nurses come in contact with

*Read before the North Carolina Medical Society, Section on Public Health, at Pinehurst, N. C.

a class of people who are the most difficult to reach otherwise.

The circumstances connected with their visits are frequently of a nature which make their advice and instruction of immediate practical value at a time when those receiving the service are in a receptive state of mind. All of these facts combine to favor the nurse as one of the most important means of disseminating knowledge relating to hygiene and sanitation.

Speaking abstractly and making allowances for individual exceptions it is probably true that public health nurses are as conscientious, capable and efficient in their particular work as any other class of workers. There can be little doubt however, that in many communities where several nurses are constantly employed by various organizations, there has been lack of efficiency through failure of a proper appreciation of what really constitutes public health nursing and also through lack of centralized authority to outline their work, define their territory and assign their cases.

It is meant as no unfriendly criticism of my predecessors to say that the nursing force of the city in which I now have the privilege of administering public health activities, was not reaching its fullest efficiency because of lack of proper organization as previously outlined. My predecessors, I understand, had appreciated the need of reorganization and centralized authority but the time was not then ripe for perfecting it.

When I assumed charge of the department there were four nurses doing visiting nurse work in the city. One of these was employed by the department while each of the other three was paid by various civic or business organizations, some of whom hesitated to place their nurse under control of the department for fear that such organization would lose both the credit of maintaining its nurse and the ability to dictate the cases for which its nurse should care.

The nurses themselves appreciated that they were not accomplishing the greatest possible results and were anxious for organization under centralized authority.

Several conferences of the various employing organizations were held at which it was pointed out that all were aiming at the common end of preventing and caring for disease.

Attention was called to the fact that when each nurse operated at large in the

city there was bound to be much overlapping of travel and effort. It was also shown that without proper centralized authority there could be no coherent plan of work or means of directing it. The need of a supervising nurse to plan, direct and teach was made clear.

Finally the seed shown at these conferences bore fruit and an agreement was reached that all the nurses should be responsible to the health department and that all cases under the patronage of any one of the various civic, charitable or business organizations should be cared for by the nursing force irrespective of by whom each nurse was paid.

No funds were available in the health department for the salary of a supervising nurse but some of the ladies most active in the organizations which were supporting the nurses successfully appealed to mill owners for funds and the supervising nurse's salary was thus provided.

The city was divided into districts which were not of equal geographic size, but which, from an estimate of the social and economic character of its inhabitants, it was arbitrarily decided would offer about equal amounts of opportunity and work.

A small fee varying from five to fifty cents for each visit is charged to those able to pay, although service is not denied to anyone owing to inability to pay even the smallest fee. This pay system has been adopted for three reasons. First, that it might eliminate the feeling of being a recipient of charity which is obnoxious to so many. Second, that it may obviate a tendency to pauperism through dependence on either charity or free service, and third: that it affords some revenue for the purchase of supplies and the maintenance of the service. The wisdom of this fee system has been amply demonstrated, especially since one of the mills contributing to the fund for the salary of the supervising nurse has withdrawn its support.

In connection with the collection of a fee for service it should be noted that no such charge is made to families of mill operatives employed by the contributing mills.

Personally I am not an unqualified believer in specialized nursing in the sense that a nurse must do nothing but tuberculosis work, prenatal work, etc.. I think that a nurse who is capable of doing public health work of one kind is capable of doing all kinds, for practically identical principles govern most of the work.

It seems to me that a nurse who comes into frequent and intimate association with her client under all kinds of circumstances and particularly when she has rendered some tangible personal service can secure fuller confidence and better co-operation from the families under her charge than a special nurse who must often undertake to do what the family naturally antagonizes.

With this belief I have organized our force of nurses so that each one does all kinds of work, beside nursing, tuberculosis, prenatal, postnatal, infant welfare, school and quarantine work. Each nurse visits regularly the schools of her district and refers suspected illness or defectives to the family or departmental physician.

The supervising nurse secures from our files reports of sickness and births, she also interviews physicians who are encouraged to notify her concerning maternity cases and all these are assigned to the proper district nurse. The supervising nurse also attends clinics and visits schools and private cases with the district nurses. She also keeps and compiles all nursing records and the morbidity spot maps.

No means of transportation is provided for the nursing force other than that furnished free by the street railway company. On occasion the department provides a car for visits in the suburban and rural sections not reached by trolley.

On the whole I think the civic and business organizations and the nurses are satisfied with the new arrangement, which has maternally increased the efficiency of the department by making possible the extension of old lines and the addition of new lines of work.

Outline of a Plan for the Education of Home Nurses.

If there was any doubt that there was a vast number of homes in which no member of the family had any adequate knowledge concerning nursing or the home care of the sick, the influenza epidemic dissipated that doubt and proved that modern housekeepers need some sort of instruction which will give them some practical knowledge concerning disease and its care. To those of us who recognize the probability of a further outbreak of influenza, the need of this knowledge is perhaps more clear than the means by which it can be imparted.

No physician is long engaged in practicing his profession when he learns that a goodly portion of his hurry calls come from sources not in urgent need of im-

mediate attention. No doubt most of us can recall instances during the panic of the past epidemic which would be quite ludicrous were they not bordering on the tragic. At least some of us charged with the administration of community relief measures were much annoyed by the number of cases calling for immediate attention, which upon investigation proved to be due to overalarm or even hysteria.

On the other hand many families did not appreciate the gravity of the cases in time to secure the early attention needed.

Cases were noted in Wilmington's epidemic where the family had absolutely no knowledge about preparing the simplest articles of diet for the sick, where attempts were made to take temperature with the wrong end of the thermometer in the mouth, and one colored nurse was reported as going about taking temperatures with the bulb broken off the thermometer she used.

Much ignorance was manifested about counting the pulse and respiration, the care of sputum and other bodily discharges, as well as of the importance of bathing, keeping the bed smooth and pillows arranged and other simple sick room facts, which every homekeeper should know.

In casting about for a means of getting some practical nursing knowledge into the home, it was suggested that it might be done through training women in small groups, each of whom would in turn teach other individuals or groups in their respective neighborhoods. Churches, schools and other organizations were appealed to through the press to send volunteers to receive this instruction and these groups were assembled at schools and convenient places where the instruction was given by myself and the district nurses.

The Red Cross manual on home nursing and sanitation was used as a text book in connection with a schematic outline of important points to be explained and demonstrated.

A brief outline of disease classification was given and bacteria and protozoa were explained in their causative relationship to the communicable diseases. The methods of transmission of these diseases were discussed, as were the necessity for and means of disinfecting bodily discharges from all sources. Disinfectants were either shown or spoken of as types and their method of preparation in proper strength explained.

The district nurse gave instruction and practical demonstration in counting pulse

and respiration and in taking temperatures and the care of the thermometer. A discussion of the relation of pulse respiration and temperature to the character of the illness was included.

The nurses gave instruction by actual demonstration as to how to make a bed and place pillows, noting the relation of wrinkled sheets and lumpy beds to bed-sores, how to use the bed pan and disinfect discharges, how to give partial sponge baths and how to care for the attendant's hands.

A little something was also said about diet and methods of preparing a few simple dishes for the sick.

The instruction to each group was embraced in three or four informal talks and the audience was urged to ask questions about the work. From the shortness of the instruction to each group it is of course apparent that only the most elementary principles were discussed.

It was hoped and intended at the start that these groups would continue the work under the Red Cross and secure certificates, but through some technicality about the instruction not having been given by the Red Cross nurses to formal applicants for the Red Cross course these certificates could not be issued.

How well these groups may have later spread their knowledge in their respective neighborhoods is an undetermined factor, but it is felt that the method has possibilities of further development especially as it affects the teachers and through them the scholars over whose destinies they preside. The interest displayed by the negro groups, which were largely made up of school teachers, was of itself enough to warrant the effort.

Unilateral Gynecomasty after Injury to the Testicle.—Apert and Declety relate the following curiosity of medicine: A soldier, aged 25, was wounded in the scrotum in October, 1917. In the following March he was found to have a right breast agreeing in all respects with that of a young girl at the beginning of puberty. Investigation showed that the right testicle had been involved in the injury. Such behavior has been known to follow only mild lesions of the testis—never severe traumatism or total destruction or castration. The precise mechanism cannot be comprehended but both the nervous and endocrinic systems must be involved.—*La Presse Medicale*.

CLUB OPERATIONS FOR SCHOOL CHILDREN.*

By G. M. Cooper, M. D., Director Medical Inspection of Schools North Carolina State Board of Health.

From "The Sailing of Ulysses King of Ithaca against Troy", to "The Signing of the Armistice with the Germans" last November there has never been any event in the world's history but what there was some urgent cause for action. To come immediately to the point, what we term "Club Operations for School Children" is simply one solution of a problem which has been with us for many years. The problem is, Make available the services of first-class throat specialists to the masses of school children who need operations.

The medical inspection of school children has been an every-day affair in Japan for more than thirty years, it has been compulsory in England for twelve years, and the results of the draft examination in the United States of America have proved that this service must be made country-wide in the United States. The medical inspection of children per se is worth but very little unless followed up by the specific measures taken to provide the treatment necessary for the correction of the defects found. It is simply irony to send a child's parent a note stating that his child is in need of dental treatment if the father lives twenty miles from the dentist and has no money. The same thing applies with still greater emphasis if the father is sent a note stating that his child ought to be operated on for removal of diseased tonsils, when he lives a hundred miles from a specialist and has not the price of a railroad ticket. There is no more important or legitimate field in preventive medicine than the providing of these operations, especially for children who we know will grow up and develop tuberculosis or chronic rheumatism or some of the other numerous diseases incident to starting out with a diseased throat, especially in families with tainted ancestry. While the specialists as a rule are able and willing to sacrifice time and skill in helping to correct these defects, few of them are able to sacrifice the great amount of time necessary to operate on these children at random, at irregular periods, as most of them would have to do, unless we have a definite system pro-

*Read before Section on Eye, Ear, Nose and Throat, N. C. Medical Society at Pinehurst, April 16, 1919.

vided by which the greatest amount of work can be utilized in the smallest time and with the least expense and effort.

Again, 95 per cent. of the children who need this operation most will never get it unless the arrangements are made for them, the service brought near, and much urging done to get them to consent to the operation. It is different from an attack of appendicitis, in which there is severe pain and it is either do something or die, a condition which the most ignorant parent can see for himself. A child with a diseased throat gets into the condition gradually, the parent is terrified at the thoughts of an operation, and he keeps thinking that perhaps the child will get better as he grows older without anything radical being done; consequently no operation is ever done, and the child suffers the consequence.

So this plan of work as devised has been put into practice all right in a few counties and it is now planned to greatly extend this work as a distinct and integral part of the follow-up work of medical inspection of school children as undertaken by the North Carolina State Board of Health. We are concerned simply with the school children. No club will be open to any child under six years old and to no child unless he is a bona fide pupil of the public schools of the State. The work of medical inspection must first be properly done according to the required State law and the parent of the child will be required to have a certificate from the Director of the Bureau of Medical Inspection of Schools of the State Board of Health before being eligible to the club for his child. All the details in arranging for these operations are looked after entirely by a representative of the State Board of Health, relieving the specialists of any anxiety whatever about any of the preliminaries or the detail work, so that he may simply confine all his energies to the operation itself.

Some of the definite regulations concerning this work may be enumerated as follows:

First: No man will be engaged for these club operations that is not eligible for membership in the American Society for Laryngology, Rhinology and Otolaryngology. In other words, no matter how capable some part-time specialists may be we cannot afford to take chances, and therefore nothing but the very best whole-time specialists will be engaged. If you will just stop a moment and put yourself in

the place of the parent of the child in a matter of such great responsibility as here attaches to the State Board of Health, you can readily see the justice of our position. The only exception which will be made to this rule will be in favor of good general surgeons, who do a great deal of throat work in localities far from the best specialists; and where no less than seventy-five per cent. of the local physicians would be willing to sign a written request to this effect.

Second: The child will be operated on in what might be termed "Emergency Hospitals"; that is, the children will be grouped at the county seat town or in some town in the county where good electric current is available. Cots, with sterile sheets, etc., will be provided, and the children will not be allowed to leave this place until the day following the operation. They will be watched closely by the special nurses in the employ of the State Board of Health; so when they leave the clinic there will be absolutely no danger of secondary hemorrhage or other complication. This rule will never be departed from.

Third: Under the plan we propose to strictly follow, no previous opinion or positive diagnosis will be undertaken by teacher, trained nurse, county physician, family physician, or anybody else. When the child goes to the clinic, recommended for an operation, it will be with the distinct understanding that the specialist who is to do the operating is to render the final decision about whether or not the operation is essentially necessary. Absolute conservation will be the motto in the whole procedure.

For the small percentage of children who have errors in vision which are not directly due to diseased throats and as such vanish a few months after an operation for the removal of diseased tonsils or adenoids, the only method that we can satisfactorily follow will be to employ an eye specialists for his whole time. You will readily see that this is necessary, because the club plan, owing to the tediousness of making eye tests, will not materially lower the cost to the parents. That being the case, nothing much would be done. So we would like to request that this Section recommend at least three eye specialists who would like to engage in this work for their whole time, that we may select one of the three for a salaried position with the State Board of Health.

In conclusion, just a word as to the fees and methods directly relating to the work

of the specialists. As this movement is positively not concerned with the ambition of any struggling young specialists who are endeavoring to make a reputation for themselves, and is certainly not an apprenticeship school of practice affording clinical material to such men for practice, no matter how worthy they may later demonstrate themselves to be, nothing but the very best is good enough for North Carolina school children. Therefore, we earnestly hope that the very best specialists in the State will lose no time in volunteering their services when and where available. The fees will be at greatly reduced rates, because of the wholesale nature of the work, but at the same time the work will be abundantly remunerative to the men who engage in it. But if there be any member of the Society who is fearful lest his business be interfered with, my free advice to such would be to go and join the practicing physicians who were fearful when the State Board of Health began its war on typhoid fever in earnest four years ago, that their business would be ruined. Go, join those of the brethren out for the cash and engage in the grocery business or run a garage. We hope this Society will see fit to have a committee to go into this matter thoroughly in consultation with the State Board of Health so that no mistakes may be made and that neither party to the procedure may ever see any cause for regret at the undertaking.

Slow Convalescence

The strong, virile, robust individual who emerges successfully from the attack of the pneumococcus, the bacillus influenzae or the mixed infection of typhoid, is more than like to recuperate rapidly from the depressing effects of the systemic disease from which he has suffered, and his convalescence will be prompt and uninterrupted. It is not so however, with the patient, whose vital resistance was at a comparatively low ebb before the disease invasion. In such cases, tardy convalescences is the rule, unless active measures are taken to revitalize the blood and thus restore and repair the essential solid elements—the red cells, and the oxygen-carrying hemoglobin. Pepto-Mangan (Gude) performs just this necessary service by furnishing the needed organically combined iron and manganese to build up the blood forming functions of the organism. It can also be depended upon to improve the appetite and act as a general tonic, and reconstructive, without deranging digestion or causing constipation.

SOME OBSERVATIONS ON THE CORRECTION OF NASAL DEFORMITIES BY PHYSIOLOGICAL METHODS.

By William Wesley Carter, A. M., M. D., F. A. C. S., New York City.

Recently it was my privilege to hold a clinic on Bone-Transplantation for depressed deformity of the nose. There were present several distinguished members of one of our most important special societies. These gentlemen were well acquainted with my writings on this subject, and when I had finished the operation, apparently much to their satisfaction, with almost one accord the observation was made by them that I had done several things which I had never mentioned in previous descriptions of my technique. The point was well taken, I was fully aware that some of the necessary details in the work done upon that particular patient had not been described by me. But if I had reported in detail that case these gentlemen could, if they had witnessed my next operation justly have made the same observation. To me nasal deformity cases seldom present exactly the same problems, therefore the solution must be different and in descriptive accounts of this work one must confine himself largely to essentially basic principles. The indispensable little details, upon which we rely for the excellency of the result, vary in each case and these details depend upon the personal equation and artistic sense of the operator for their recognition, and his experience and skill in the application of corrective methods. A failure to recognize these principles by men who regard nasal deformity work as being in the same category with mastoid operations, submucous resections, turbinectomies, etc., accounts for much of the criticism by these men of the methods employed by those who have made a special study of this subject. The excellent results secured in this work are due not so much to the gross fundamental procedures necessary in every case and which would be recognized, appreciated and might be copied more or less successfully by an attentive onlooker, but to the essential little details the demand for which in each case must not only be discovered by the eye of the artist but must be executed by the hand trained by experience and above all endowed with that intangible Heaven-given attribute to which has been applied the term *tactus eruditus*. It is the

latter consideration that has placed nasal deformity work in a class by itself and has rightfully assigned to those possessing these attributes the first consideration in its execution, and while excellent or even satisfactory results cannot always be forecast, yet unquestionably the patient's best interests will be consulted when the above characteristics in an operator are given their full weight. I may add that in the correction of some nasal deformities even the most experienced surgeon is called upon to delve deeply into his resources and to exercise all the skill and patience that he may have acquired. It must always be kept in mind that where the first operation has resulted in a failure secondary operations are rendered much more difficult and satisfactory results are less apt to be secured owing to the destruction of tissue which might be utilized to advantage and to the increased amount of scar-tissue which, in many cases must be excised.

A number of patients have come to me to have paraffin removed for various reasons, chief among which are: The deformity was not corrected; because of the mobility and plasticity of the paraffin; because the paraffin had shifted its position or because of changes in the color of the skin over the injected area, especially to be noted after sudden changes in temperature, as in going out of doors after being in a warm room. Where a bone and cartilage transplant is to be substituted for this substance especial care must be taken in preparing the field for if the paraffin has been in the tissues for any great length of time changes have occurred in the latter which are unfavorable to the growth of the transplant. Not only must all of the paraffin be removed, but also as nearly as possible the sacs of fibrous tissue which surround the particles of paraffin. Paraffin does not become organized, but becomes encysted. The oil which is used in reducing its melting point is in time entirely absorbed. The material which I have removed from a number of patients is a white, dry mass which may be easily rubbed into a powder between the fingers. Paraffin as its derivation, *parum* little and *affinis* affinity, implies, is characterized by a remarkable chemical indifference to all substances. It is a saturated hydro-carbon and can enter into no combinations without the destruction of its molecule, therefore it remains an inert foreign body in the tissues. Because of the fact that it is injected into the tissues under pres-

sure and in a semi-solid state, many of the adjacent capillaries are occluded and the vitality and reparative energy of the subcutaneous tissues are correspondingly impaired. The fact that the paraffin, when it is injected, percolates between the fibrous trabeculae which extend between the skin and subcutaneous tissues, sometimes causes it to be encysted in separate lobules. The cutis vera is sometimes invaded; this makes the removal of the paraffin a tedious undertaking. The involvement of the skin, which is, I understand, a fault in the technique of injection, is a particularly difficult handicap in the preparation of the field for the reception of the transplant. If the field, however, is properly prepared the substitution of bone for the paraffin can be satisfactorily effected. Since I have realized and provided for the pathological conditions produced by the paraffin I have secured excellent results in these cases.

In every case of bone transplantation for nasal deformity this procedure must be looked upon as a basic, primary operation, which must, in a certain number of instances, be supplemented by other procedures, such as the filling in of lateral depressions with bone shavings, or the reduction of the prominences by the subcutaneous transposition or shifting of the tissue involved. In doing this latter subcutaneous work delicate instruments of special design are required and great care must be exercised not to cut off the blood supply of the transposed tissue. Complete fixation of the parts by means of a suitable splint is necessary and I have found that the early establishment of the circulation and healing in of the transplant is greatly facilitated by the application of a proper degree of heat by means of a water jacketed splint which I have devised for this purpose.

Each case must be studied from an artistic point of view, and we must recognize that the shape and to a large extent the expression of the face depends upon the proportional development of its bony substructure. A disproportion between the shape and size of the nose and its facial environment means a deformity. No matter how perfectly formed a nose may be if it does not harmonize with its surroundings the effect produced is not pleasing.

Practically all of my nasal deformity work is done from within the nose and no external scars result. I have found it possible to make almost any desirable

change in the shape and size of the nose by the subcutaneous shifting of the tissues and where there is a deficiency in the amount of available material whether it be bone, cartilage or soft tissue, it may be supplied by transplantation from some other part of the body. No foreign material is introduced, therefore the correction is secured by physiological means, the parts are restored to their normal state and the results are permanent.

69 West 50th Street.

The Relief of Sciatic Pains and Lumbago.

Despite the dicta of certain philosophical physicians that pain should be endured, and indeed is, after all, but a beneficent reaction of the nervous system against threatening forces, relief from pain will be sought by all. In fact, it is obvious that long continued pain exhausts, while excruciating pain, as that of sciatica, urgently calls for relief from the standpoint of rational therapeutic practice. To draw attention to one feature of pain alone which demands, at least, its temporary subjection, reference may be made to insomnia. It is patent that sleep is impossible so long as acute pain is present and it is also clearly apparent, that sleeplessness, lasting over a period, will sap the strength of the strongest constitution. The strong prejudice that exists against overcoming pain, is mainly because the result is often, perhaps usually, obtained by the employment of narcotics, which although affording the longed for effect, not only upset the digestion but what is worse by far may and frequently do establish the drug habit. Phenalgin is a remedy for pain which acts with a sure and uniform efficiency, and at the same time does not lock up the secretions, upset the digestive functions, nor bring about a drug habit. In other words, Phenalgin relieves pain without exerting any injurious action on the human mechanism and permits and encourages the physiologic forces of the body to work at normal speed. The use of Phenalgin, therefore, is of the greatest service in the treatment of pain from all sources for the reason that it does not interfere with the vital forces of the body but if depressed from one cause or another gives them an opportunity to recuperate and regain their normal tone.

ACCIDENTS ENCOUNTERED IN THE PRACTICE OF OBSTETRICS IN THE COUNTRY, WITH REPORT OF CASES.*

By J. W. Halford, M. D., Vice-President N. C. State Medical Society, Lillington, N. C.

My report covers the last 500 cases of obstetrics seen in private practice. A majority of these cases were in the country, frequently many miles away from trained assistance. The physician doing this class of work is frequently brought face to face with the more serious complications of obstetric practice, with no assistance other than a sympathetic, though ignorant, colored "mammy" and a few badly scared relatives. It is in this dilemma that we recall having heard a classic on technic and mode of procedure in perineal laceration, or perchance just the successive steps and proper modification in the treatment of puerperal eclampsia, post-partum hemorrhage or some other complication. Under each condition, and with two lives depending on our unaided ingenuity and dexterity, we can only envy our more fortunate brother doing this work in the city, surrounded as he is, by trained nurses and as many consulting physicians as the importance and gravity of the case may require.

In 353 of the 500 cases I was in attendance early enough to diagnose the position and presentation. Of these cases 329 were anterior position, with left occipito-anterior 224 times, or 63.45 per cent., right occipito-posterior 88 times or 24.92 per cent.

Some of the cases recorded as anterior were primarily posterior, but were ultimately converted and are, consequently, listed, as, anterior.

There were 24 posterior position, with left occipito-posterior 18 times, or 5.09 per cent., right occipito-posterior 6 times, or 1.68 per cent.

The face presented 6 times, or 1.68 per cent., all of which should be included in the anterior position.

The breech presented 11 times, or 3.11 per cent., which were also anterior position.

Transverse presentation occurred in 7 cases, or 1.04 per cent.

Podalic version was done in 4 cases, or .08 per cent.

Post-partum hemorrhage occurred 3 times, or .06 per cent.

*Read before the recent meeting of the North Carolina Medical Society at Pinehurst.

Forceps were applied in 15 cases, or 3.0 per cent.

The cord prolapsed in 4 cases, or .02 per cent.

There were in my series two cases of spina bifida, one of which was further deformed by hydrocephalus. The second stage of labor in this instance was completed only after a large amount of fluid was removed from the cranium, which was accomplished by passing a metal catheter into the cranial cavity.

In 500 cases multiple birth occurred eight times of which seven were twins and one triplets.

Puerperal convulsions occurred seven times, or 1.04 per cent.

Perineal laceration occurred in 24 cases or 4.8 per cent. This includes laceration of first and second degree, having had no case involving the bowel or sphincter ani muscle. It will be noted that laceration of the perineal body has been my most frequent complication. When we hear a physician of more than a quarter of a century in the practice of obstetrics say he has never had a laceration in his work, we can truthfully say he has been very fortunate or very careless, probably the latter. It is my custom to carefully examine every patient for this unfortunate accident, and to make a painstaking effort at repair when it does occur. It is in this field that failure too frequently follows our efforts, and we should do our utmost to prevent laceration. The methods of manipulation are very numerous, but the principles involved are few and should be thoroughly understood: prevent hasty expulsion of the head, giving time for the perineum to stretch, which is best accomplished by preventing expulsion. Relax the perineum as much as possible by support with the left hand, gathering in tissue from each side of the perineal body. In primipara we have found our greatest safe-guard in anaesthesia, with the patient on her left side. A great many of our early failures arose from using suturing material which was too quickly absorbed. Silk-worm gut is the suture or choice and will give the best results. It should be remembered that sutures placed in the perineum are more quickly absorbed than in any other situation.

Puerperal eclampsia has been a frequent complication and is not only one of the most distressing, but most fatal conditions we meet in obstetric practice. Our safest treatment is in prevention, closely observing our patient during gestation,

making frequent examination of the urine for albumin, casts and urea, and prescribing proper personal hygiene.

Soamine in Bronchial Asthma.—Ghost (Glasgow Medical Journal) recommends soamine in the interval treatment of true bronchial asthma. Some few cases improved on autogenous mixed vaccine, but several cases that improved with soamine failed to improve the vaccines. The cause of irritation giving rise to reflex paroxysms should always be sought. In cases in which egg albumen brings on asthma or urticaria, marked improvement occurs under calcium lactate and soamine. Cases showing no increase of eosinophiles in the blood do not improve under soamine, but these cases are few. The plan of treatment consists in giving one grain of soamine by hypodermic injection and increasing one grain with each injection until three grains are reached. At first the injections are given twice a week, and later, as the conditions improve, once a week for two or three injections. If paroxysms do not appear during this period, an injection may be given once a fortnight, and then once a month for one or two more injections. The number of injections required to produce total absence of paroxysms varied from six to eighteen—rarely more. Some patients, who used to have paroxysms almost daily, have been free from any attack for over a year. The mode of administration consists in boiling one mil of water in a teaspoon, dissolving a soamine tabloid in it, and then injecting the solution in the arm, after local disinfection with tincture of iodine. The injection is not very painful; sometimes small nodular masses form, but these eventually disappear. No untoward results such as dimness of vision or albuminuria were ever noticed. Cases with chronic kidney lesions should, however, not be given the treatment.

Artificial Lemon Juice.—Huerre gives the analysis of lemon juice as follows: Citric acid, 7.50 c. c.; malic acid, 0.50; saccharose, 0.45; invert sugar, 2.00; potassium citrate, 1.00; calcium citrate, 1.00. In addition there are traces of iron and phosphorus. Water, of course, to make 100 parts. If a synthetic lemon juice cannot be substituted for the natural product it must be because something akin to vitamin is present in the latter.—*La Presse Medicale*.

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EDWARD C. REGISTER, M. D., EDITOR
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COMMUNIZING THE MEDICAL PROFESSION.

Not long ago, Dr. Vincent who is president of the Rockefeller Research Bureau, in somewhat of detail outlined as he sees it coming, the new relationship that the practice of medicine and surgery is to bear towards civic, and sociologic life in this country.

As Dr. Vincent sees it, medicine in its broad sense, is to be simply one of the co-operating bureaus of government. He sees the members of the profession as having lost all personal initiative, and he sees physicians and surgeons merely working a specified number of hours in a day, at a governmentally fixed price. He sees the physician having absolutely nothing to say as to whom he will attend, and also sees the patient having absolutely no choice as to what physician shall treat his troubles.

Dr. Vincent has not in so many words carried his logic that far, but all this, so far spoken of, is the next inevitable step to what he advises physicians to prepare for. And it staggers one's mind, when one stops and tries to figure out what it all means, when a most learned man calmly proceeds to map out what really seems likely to be in store for medicine, in the immediate future! As unjust, and as unworthy, and as retrogressive as it all is, medical men know that the calamity has come upon us, through the workings of evolutionary law. Some place the seed of this thing has been sown, and has been allowed to develop.

Medical men always reason from within outwards, so to speak. From this sociologic calamitous condition of things, the mind of the medical man travels out in all directions, hunting for its germ. There are two principal conditions, either of which may have been the cause of the sociologic disease. (a) As has been pointed out, it may have been at first a little insignificant pernicious idea. (b) The disease may be the reaction to the dominance of some great wrong?

The medical profession must wake up to the fact that if this thing has grown out of some neglected duty in the past, the only way out of it is to now take up

that duty. From a study of the intellectual standards of those backing the immorality, it would seem that the duty neglected in the past, may have been nothing more than the neglected wholesome education of these people when they were boys and girls. For some unaccountable reason, physicians almost universally feel that matters of public interest—particularly political matters are contentious affairs, into which physicians have no right to enter; and the result is, that the medical profession is obliged to take what may be left after the scramble is over. And now, looking at the matter from the view-point of past neglected duty of this kind, one gets the impression that something is about to be handed out, because to the mind of the mob, the medical profession is easy.

The present socialistic craze, like all other evil things, is bouyed up the hope of getting something for nothing. Some one has something that the degeneracy instinct of socialism wants to get hold of—wants to get hold of it by a short cut. Above all things it does not want to work for it, and save for it, and sacrifice for it. It is perfectly willing to terrorize, and confiscate property, and seeks to bring industry and frugality down to the immoral level of the mob. Socialism is reversion to type.

Now, business enterprises may have in them all of the destructive elements of socialism. And too, such business enterprises may be mighty successful in amassing wealth. But all the time that those enterprises are at work getting that wealth together, minds outside of the business corporations are more and more reacting to the injustices, and sooner or later there will be another injustice which will be destructive in opposite directions; and this injustice will check or destroy the so-called business enterprises. This is biologic law. It is evolution's way of doing. That is to say, injustices of the business enterprises, would themselves eventually wreck mankind, and evolution to save mankind reacts to the production of outrageous ideas which by their very awfulness, call attention to the evil that has been permitted to masquerade under the cover of legitimate business. Evil always parades itself as being something beneficent, and evolution leaves it with man to be fooled by evil, or pretend to be fooled, just as man elects in the matter. As has at other times been laid down in these columns, evolution always squares accounts with civilization in just this way. It is

a curious feature of intellectuality, that the mind of man is not likely to be much interested with mental abnormality, until after the abnormality has reached big proportions. The communistic idea that seems almost sure to submerge the medical profession, has not grown up in a day. It is a sociologic plague sure enough, but it has some biologic design, nevertheless.

Of course in the present chaotic condition of world's affairs, one needn't waste time in wondering over actualities, or in wondering over possibilities. The world as a whole is topsy turvy, and this part of the world is as topsy, as any other part of it. Just what the present mental condition of the world really means, one hardly dares hazard a guess; but the communistic idea is so dominant in this country, that its study and sane solution is vital to the life of the medical profession, and hence vital to the life of the nation.

PEKING UNION MEDICAL COLLEGE.

The announcement of the Chinese college of the above name is before us, and to the student of world affairs it is of more than passing interest. For years past Christian missionaries in China, as in other foreign lands, have recognized the valuable opportunity afforded for the more rapid evangelization of the peoples they were working among if ability to minister to the diseased body was possessed along with the functions of the preacher of better, or other system of morals, hence for some time many missionaries in embryo for foreign fields, have availed themselves of opportunities for graduation in medicine in America and Europe prior to embarking for active service in the countries of the far East. A few years since an effort was made to organize one or more modern medical colleges in China, but the difficulties in the way were just those encountered here at home by the small unendowed schools of medicine and it was manifest that for modern medicine to fully come into its own in China it was absolutely essential that a modern college with proper teaching and hospital facilities should be provided.

The Rockefeller interests in America became willing to engage in such worthy efforts, and as a net result two years since the amalgamation of three small colleges of medicine in China was ef-

fected and steps taken to make the Peking Union Medical College a fully equipped, up-to-date school of modern medicine that would in building, equipment, and teaching personnel compare favorably with class A colleges in the United States.

A pre-medical course is given for three years, and the entrance examinations, as well as graduation requirements, are "those prescribed by the Chinese Ministry of Education for medical schools of university grade." Both the faculties of the pre-m. and the medical school are competent American and European doctors, a number of them men who have had teaching experiences in some of the best schools of these countries.

Instruction will be given chiefly in English, though a number of courses, notably in pre-medical and post-graduate instruction, are given in Chinese. Women are admitted with men to all the college work.

The annual "tuition fees are \$100.00 Peking silver currency," and "board is provided at \$6.00 per month in advance."

On admission "each student is given a thorough physical examination, and a complete record of the findings made"—a practice which could well be emulated at once by medical schools of the United States, the country responsible for the financing and organizing of the Peking Union Medical College!

A building devoted exclusively to the promotion of the religious and social life of the students is provided, and a training school for nurses is also a part of the development. In short apparently nothing has been left undone by the wealthy and intelligent interests engaged in the promotion of this great and most benevolent enterprise, to make it complete in every respect.

Fortunate indeed it is for China that such interests have been induced to lend this kindly helping hand in furthering the development of a knowledge of Occidental medicine; and it may be said with equal truth, fortunate also, it is for free America and her vital concerns in the far East, that it is her enterprise and money that is engaging in this splendid work for the bettering of humanity among the millions of China. The benefits will prove reciprocal, and America may be congratulated in the wisdom of those who have placed this great college with the needful millions of money behind it in the centre of China's business and other interests at the psychological hour.

VENEREAL DISEASE AND ITS PROPHYLAXIS.

Old Adam lied about it, and tried to hide his cowardly unmanliness behind the attempted disgraceful creep-out, "The Woman That Thou Gavest Me * * *"; and man has been playing the same dishonorable game ever since. The game busted up the Garden; busted up Old Rome; and if there is still operative in the world such a law as the law of justice, then there are some more bust-ups booked for man in the future. And back of the degradation of it all, there is nothing more than the degeneracy instinct let loose through man's moral cowardice.

The above few lines constitute a word picture, in ultra scientific terminology, of a very dirty sexual matter. It is a picture of a slimy creeping thing. It shows man, at man's worst! It shows man ruining women, but lacking the sense of honor, that would own the deed!

A glance at the thing, is sufficient to show that this specific act of unmanliness is not in its entirety, easy to put into words. The motive behind the game is as old as is the heart of man, and is as dirty as the degenerate cunning of the mind of man can make it. This of course, makes the other name for sexual prostitution to be, moral cowardice in man; and hence makes the dominance of the beastly instinct in man, the other name for his moral cowardice. It's a whip-row of crime cause, and of crime effect. The moral cowardice of old Adam, and the moral cowardice of the Adam of today is thus made over into gonorrhoea and syphilis and the other remunerations for prostitution.

Scientific medicine must divest the discussion of sentimentality, and must study the disease just as any other disease is studied. A thing that medicine has not been doing. Man ruins the woman and then sentimentally puts the blame on the woman; and the worst part of the crime is this insult to womanhood. The sickly shame of it! The world always has allowed this sin to go on, and the world has always had to pay for it regardless of prayers and medical and mechanical attempts at prophylaxis.

Moral degeneracy would like to satisfy its desires, and not be obliged to pay up, but it is the foundation principle of all things medical, that the crop will exactly equal the seed, plus the soil. No form of prophylaxis ever has been able, or ever will be able to furnish healthy women for

the gratification of this instinct in men. The building up in men of moral stamina, is the only prophylaxis for venereal disease.

However, the idea that this moral degeneracy in men should be protected against the seductions of women, has even captured churches, and there is scarcely a meeting that does not tell about the "ruined woman's trade," and one will listen through many meetings and not hear a word about the trade of the man who ruined the woman! It is this sissy-sickly teaching that the law; and officers of the law; and the churches; and society; and every body must work and devise plans for the protection of men against women—it is this sort of thing that furnishes the excuse for committing the immorality, that the man who is standing round waiting to be seduced, is looking for. It is the very thing the degeneracy wants, and the more there is of coddling of the willing-weak, the more there will be of venereal disease. This is good biology. It is good medicine. It is common sense.

Moral stamina, is not something that can be prayed into a man. It is not something that a virtuous girl can pass out to a company of soldiers, through the public dance. Moral stamina costs something. Moral courage grows with the use of courage. Moral stamina in man is not something that asks to be protected against women; but it is a power in man that is itself a protector of women. This isn't theology. It is medicine. It is a medical discussion of venereal disease, and its prevention. There has grown into the mind of society the precious idea that sexual prostitution is entirely different from other diseases; and so it has come about that after some man has ruined a woman and has got caught at it, society sends the man a bouquet of flowers dampened with tears of sympathy. Men are not innocent sinners against sociologic law, but they are cowardly, sinners.

The real disease discussed here, is the moral depravity of men. Gonorrhoea and syphilis and the physical and mental wreckage growing out of these tell-tales, are but symptoms of a contagion. Medical men know this to be so; and they know too, that as long as sentimentality dallies with the matter, just so long will men ruin women; and just so long will evolution through the spectacle and fact of venereal disease, continue to try to call man's attention to his immoral thinking.

The most sickly apologetic thing—the

most incriminating thing that can be said of any body of men is to say that, "No immoral woman has been allowed to be within ten miles of those men." Red blood in a man, ought to resent such insinuation; but the humiliating fact is that such statements, implying mental and moral weakness in that body of men, are looked upon as being in some way highly commendatory both to those who provided the protection, and also to those who were protected against women!

It has been the common newspaper way of putting things, to say that at "certain public dances, no woman was allowed to be present who did not present credentials of good moral character"! Medicine cannot do less than deal with this matter just as it is. In any community, there are a hundred sexually immoral men, to one sexually immoral woman. But singularly enough, whenever the press or pulpit refers to "the prostitute," it is a woman who is being held up. Also "street-walkers" are always women!

It is possible that medicine may not be able to point a successful treatment for the moral depravity in men, but it can be safely asserted that if women were given the legal authority to keep men away from women; if some of the brightest of the men ruined women were put on the police force, there are lots of men who are now anxiously waiting to be enticed, who would quickly lose themselves in the direction of home.

THE PSYCHOLOGY OF THE HIGH-HEELED SHOE.

Somewhere, there is some one who thoroughly understands some of the capricious tendencies of the female mind. And that specialist in the psychology of femininity, is a designer of female wearing apparel—is a designer of shoes.

Possibly the designer is a woman? in which case she does not need to be a psychologist at all. She just naturally goes ahead and does it! Intuitively, a woman designer would know that a shoe-heel three and a half inches high, and that first touches the ground two and a half inches in front of the back part of the sole of the foot—she would know that a shoe made like that would please some woman. And she would know too, that when another woman saw on the sidewalk, the toe and heel marks of a shoe that was at least two and a half inches shorter than was the woman's foot that filled the shoe—she would know that that

woman would have a shoe like it, or she would know why! Knowing that much about women, she would know that the shoe would sell. Then comes in the law of demand and supply, and hence the shoe.

So much one can say with comparative safety, because every woman will at once say, "It isn't so"; will say in fact, that, "There isn't a word of truth in the statement," but that "They wear high-heeled shoes simply because they can walk better in them; because they make them feel better in every way, relieve back ache and all that; and because they don't make corns!" And that will end it.

To the women who make them, such statements as the above as to why they wear the shoe of higher and still higher heel, the statements have all the substantial qualities of real reason. And if in the years that have led up to maturity, the lessons of life have been at all well comprehended, the one who starts out to discuss this feature of psychology, will be very conscious that the discussion is of a fact and not of a theory. Also it may just as well be admitted that the statements are sane statements, of sane women. From any other point of view a discussion would never get anywhere. Any idea or theory that disagrees with it, is in need of psychotherapy. The view-point is one of the many similar view-points of the mind that not only rocks the cradle, but of the mind that rules the world. Of course the mind is accountable only to itself. Admit it!

As being a matter entirely separate and apart from the above mentioned practice of wearing high-heeled shoes, it is interesting to think for a minute of the contracture of the posterior leg tendons, that permanently elevates the heel. If—to look at such deformity in a sensible wholesale sort of way—it should come about that a very large proportion of the wealthy, and semi-wealthy, and the prospectively wealthy women of the country, who have nothing in particular to think about—if all such women were suddenly afflicted with such contracture, the medical profession would be severely blamed for having permitted the affliction. Also if such contracture of tendons had thus produced a country-wide deformity of female ankles; and if the high-heeled shoes now on display in the show windows, represented orthopedic efforts to make bearable the calamity of the deformity, the ever present advertisement of national disaster, would in the extremest degree,

make the heart sick. The more costly the apparatus, the greater the hurt—the more to be covered up. The higher the heel, the more sympathy that would go out to the victim who would have to wear it.

ENDOCRINOUS DEMORALIZATION AND INFECTIOUS DISEASES.

This title is used advisedly. The word endocrine has come up out of deep confusion, and apparently has come to stay. It not only stands the light of investigation, but it seems to be itself a light that is opening up hither to dark places both in physiology and in pathology. But do the best any theory can do, in the matter of solving physical systemic problems, the theory always carries with it the impressive thought that it is after all, only a theory. Nevertheless, a theory is more comforting than is an hypothesis. And in the present instance, the endocrinous theory may be said to be the child of many hypotheses. Endocrine is a good word. The thought of as including everything that it is made to include, it is one of the biggest words in medicine. And probably with more emphasis any other one investigator, Sajous* did it.

There is no book that the anxious troubled physician may be said to devour more greedily, than he devours Sajous' work on the internal secretions. The book is far from being new, but to the physician there is the more of encouragement and hopefulness in the contentions of his book, simply because the discriminating hard work of time, has not been able to displace his theories, with newer theories that are accredited with being better. As has been the fate of many other theories which have been bases for the treatment of disease, time has not killed the theory that health, with all the word health implies, is but the other name for perfect endocrine functioning. Also, does the theory with just the same authority, assert that infectious diseases is the other name for an existing state of endocrinous demoralization. Right here, however, the question forces itself as to which was first, the infection or the endocrinous break-down?

As one reads the book, one is continually hoping that Sajous is right. One's interests are tremendously with him. As

one reads along, one is glad to note too, that physiology is sustained by his logic. And when one admits that he has made his case with physiology, one practically endorses his basis of pathology. At any rate Sajous does this much: He puts into the mind of the physician the picture of health. Possibly the picture does not take in everything that goes to make up health, but it is a definite point of view from which the physician can study the disease before him; and, over vagueness and indefiniteness, the picture is an improvement. Then, pathology can and does take on a distinctive form, which again is better.

From Sajous' view-point, the physician catches glimpses of two specifically acting forces. (a) A force, some chemical substance which in its control of some ductless gland, dominates the entire endocrine system. (b) A force, another chemical substance which breaks into the chain of the mutually helpful glands, and throws some one of them out of harmony. And then, by the way, is infectious disease!

But to use the term ductless gland in this way will not do, as that function which is first demoralized by the attacking infective force, may be the secretion of a white blood corpuscle. Likewise it is more accurate to say that the chemical which attacks the corpuscle, may be and very likely is the reaction auto-infection product of the infecting germ.

Like all theories, the theory of endocrinous control of both health and disease, must have a definite place from which to start. And right there, is the trouble with most theories.

The more scientifically exacting the mind of the one who puts life into a theory, the finer will be theory's starting point, and it is a good imagination that can sight finer than has Sajous. He has not flinched, and therein lies the helpfulness of his book. He fixes the seat of health as well as the starting place of disease, in the structure that connects the anterior and the posterior pituitary bodies.

It is better for the patient, and better for the physician also, when the physician fully appreciates what he is up against in the treatment of disease. It is easy enough to saw off a leg. Also it is easy to give the sick man something that is reputed "to be good for what ails him." Each of the practices has popular approval. But when Sajous makes infectious disease and endocrinous demoralization synonymous terms, he points to the fact

*Internal Secretions and Principles of Medicine. Charles E. de M. Sajous, F. A. Davis Company, Pha.

that much medicine that is now being given to sick people, may better be omitted. As well may it be owned up to too, that the finding in organo-therapy of a hormone that will restore endocrinous equilibrium, is no easy task. And here, the same as in the prescribing of other medicines, it is good practice to have faith that systemic life will somehow work out its own salvation in its own way—throwing one secretion against another secretion, and all against the infectious germ—rather than, in the present state of biologic knowledge, run the risk putting an organic substance into the circulation, of which substance systemic life may already have enough or even too much! The more respect one has for the physiologic forces at work in the body, as Sajous presents them, the more respect one has for the fighting qualities of the human body as a whole.

Cod Liver Oil in Debility of the Nervous System.

In debility of the nervous system permitting loose play in the system's functioning, there is a pointed indication for an agent of a general nutritional character.

For such a purpose *Cord. Ext. Ol. Morrhuæ Comp.* (Hagee) has shown itself to be of much value. Not only does it tone up the nervous system through offering nourishment to the entire economy, but more narrowly it serves as a direct food agent to nervous tissue itself. This general and specific nutritional value of *Cord. Ext. Ol. Morrhuæ Comp.* (Hagee) gives it a high place as an indicated agent in let-down states of the nervous system. Thus, in the extreme nervousness following a protracted illness, *Cord. Ext. Ol. Morrhuæ Comp.* (Hagee) may be used with the best assurance of success, the debility of the nervous centers being overcome by the high food value of this palatable cod liver oil preparation.

Sleeplessness.—Peacock's Bromides bring about sleep in a natural manner, that is, by producing a physiologic cerebral anemia. This well-known preparation is safe as well as effective and the administration of two to four teaspoonfuls an hour or two before going to bed will produce a sound, restful sleep, from which a patient will awaken refreshed, rested and entirely free from the depression and ill effects so common to other hypnotics. Peacock's Bromides do not disturb the stomach nor induce a habit.

EDITORIAL NEWS ITEMS

Dr. T. Evans McBrayer died in Shelby, N. C., June 24th. The Dr. had been ill for about three months. Dr. McBrayer was possibly the best known physician in Cleveland County having practiced in Shelby continuously for nearly 50 years. He was a pioneer thinker and was the first physician in that county to use the diphtheria anti-toxin, the hypodermic syringe and the fever thermometer. He unquestionably had the largest clientele of any physician in that section of the state.

Dr. McBrayer was born near Shelby December 3, 1848. He was graduated in medicine at the University of Maryland in 1875. Later he took a post-graduate course in New York and Philadelphia. He secured his license to practice medicine in this state in 1885 and joined the state society in 1904. He had a lovely personality and possibly had fewer enemies and a larger number of friends than any individual in Cleveland county.

Dr. E. M. McCoy died suddenly at his residence in Charlotte, N. C., May 28th, 1919. Dr. McCoy was a well known physician in this city and for quite a while was city physician.

He was a graduate of the medical department of Davidson College and received his diploma in 1892 and immediately afterwards received his license to practice medicine in this city. For 26 years he was an intelligent, active and successful practitioner.

Dr. James DaCosta Highsmith, a graduate of the class of 1918, Jefferson Medical College, Philadelphia, who has been serving as intern of the Episcopal Hospital, Philadelphia, has returned to his native home, Fayetteville, N. C., and will be associated in practice with his father, Dr. J. F. Highsmith in the Highsmith Hospital, Fayetteville, N. C.

Alcoholic Mania.—In treating the overstimulation of the cerebral centers by the excessive use of alcoholic beverages, Peacock's Bromides invariably exert a highly satisfactory sedative action. When the mania is active, doses of one to two tablespoonfuls may be given every hour or two with every confidence that the desired quieting effect will be produced, without the slightest danger or irritation of the gastric mucosa.

BOOK NOTICES

"Smiles," A Rose of the Cumberlands, by Eliot H. Robinson, author of "Man Proposes." Illustrated by H. Weston Taylor. Cloth decorative, 12mo, illustrated, \$1.50. The Page Company, Boston.

"Smiles" is a girl that is sure to make friends. Her real name is Rose, but the rough folk of the Cumberlands preferred their own way of addressing her, for her smile was so bright and winning that no other name suited her so well.

Smiles was not a native of the Cumberlands, and her parentage is one of the interesting mysteries of the story. Young Dr. MacDonald saw more in her than the mere untamed, untaught child of the mountains and when, due to the death of her foster parents a guardian became necessary, he was selected. Smiles developed into a charming, serious-minded young woman, and the doctor's warm friend, Dr. Bently, falls in love with her.

We do not want to detract from the pleasure of reading this story by telling you how this situation was met, either by Smiles or Dr. MacDonald—but there is a surprise or two for the reader.

This book is a first-class novel of 377 pages beautifully illustrated and one that will hold the interest of the reader from the first chapter to the last.

Rollo's Journey to Washington, a Narrative of Contemporary Travel and Adventure With Descriptions of Episodes Occurring During a Sojourn in the Capital City, by Richard D. Ware, illustrated with wood cuts by Robert Seaver. The Page Company, Boston, Mass. Price —.

This little work is refreshingly interesting. It is a humorous history of some of the humorous sides of the great war and the part that the United States took in this epoch-making event. The style is entertaining and there is a god laugh to be had from every page. The story of Rollo and his very funny experiences is good entertainment for the summer season and hot weather.

"Reconstructing America Our Next Big Job," the latest word on the vital subjects of the hour; the views on reconstruction and readjustment of the country's greatest thinkers and constructive and industrial geniuses, including President Woodrow Wilson, William How-

ard Taft, Hon. W. G. McAdoo and many others, including the industrial giants of the times. Edited by Edwin Wildman, editor of "The Forum," author of "Aguinaldo," etc. The Page Company, Boston, aMss. Price —.

In this comprehensive and exhaustive work the thoughtful American reader will find a mine of wealth in the best ideas of the best thinkers and of men who achieve things in America.

The timeliness of the work cannot be questioned, and though it undertakes to answer a big question, it must be admitted, after a careful reading of the contents, that this work is well accomplished. For every line along which reconstruction work must follow, the author has secured the advice and best thought of the right man to deal with that particular line. This applies to the political, economic and industrial phases of America's post-war problem.

America's reconstruction problem is divided into some nineteen phases, each of which is discussed by an expert in that line. For instance, under the heading, "Problems of Railroads," contributors include President Wilson, Wm. G. McAdoo, Director-General Hines, Congressman Simon D. Fess, Frank A. Vanderlip, Otto H. Kahn, Julius Kruttschnitt, Theodore Shonts, and others. This will illustrate the thorough manner in which each subject is treated in this admirable work.

It would be impossible to give a comprehensive summary of this work as it is a whole encyclopedia of information in itself, continuing the views and tested theories of many leading men of the nation.

"Jacquou, The Rebel," by Eugene LeRoy, translated by Eleanor Stimson Brooks, New York, E. P. Dutton and Company, 681 Fifth avenue. Price \$1.90.

This work is one of a series of French novels illustrating the life and manners of France, and as a sidelight on the part of France in the world-war the book is timely and interesting.

The book has a double purpose, to present a historical subject, and to meet the demands of the fiction reading public, and in the pages of the work this end is eminently well accomplished.

The hero of the story, Jacquou, relates his life story from his first early recollections to the end of his life-chapter. Brought up in poverty that is undreamed of today, the hero, assisted ably by the author, endeavors to justify his hostile attitude towards society, and more espe-

cially against those persons who have wronged him. Jacquou experienced the bitterest dregs of poverty, and in taking vengeance, he did many things that moralists would seriously question.

The story deals with the times in the post-revolution period in the early part of the nineteenth century in France. Interest is well sustained through over page, and the esarcher after fiction of a semi-serious nature will find much satisfaction in this little work, which is one of a series by the same author.

Of the Bureau of Vital Statistics of the North Carolina State Board of Health, 1916-1917. Raleigh, Edwards & Broughton Printing Co., State Printer, 1919.

The Johns Hopkins Hospital Reports. Volume XVIII. Baltimore, The Johns Hopkins Press, 1919.

"Mortality Statistics of Insured Wage-Earners and Their Families." Experience of the Metropolitan Life Insurance Company, Industrial Department, 1911 to 1916, in the United States and Canada. By Louis I. Dublin, Ph. D., Statistician with the Collaboration of Edwin W. Kopf, Assistant Statistician, and George H. Van Buren, Supervisor Statistical Bureau. New York Metropolitan Life Insurance Company. 1919.

"The Health Officer" by Frank Overton, A. M., M. D., D. P. H. Sanitary Supervisor, New York State Department of Health and Willard J. Denno, A. B., M. D., D. P. H. Medical Director of the Standard Oil Co. Formerly Secretary New York State Department of Health. Original Illustrations. Price \$4.50, Philadelphia and London, W. B. Saunders Company.

This book contains the information which the average health officer must have in order to discharge his duties. It tells the health officer what to do, how to do it, and why he should do it. It describes the various activities in which a health officer engages; his relation to boards of health, physicians, social agencies, and the public; his qualifications and methods of work; the various diseases and unsanitary conditions with which he deals; and the scientific principles on which the specialty of preventive medicine is founded. It is the result of the years of experience of the authors in public health work, both in rural communi-

ties and in New York city, and as supervisors of health officers under the New York State Department of Health. While the book is designed primarily for health officers, its simple language and untechnical form will commend it to college students, public health nurses, members of boards of health, social workers, teachers, and others who are interested in public health work.

The illustrations are quite appropriate and the author's artist has done his work well. The book is a handsome one, gotten up in the attractive style that is well known that always prevails with these publishers.

"The Blind." Their condition and the work being done for them in the United States. By Harry Best, Ph. D., author of "The Deaf: Their Position in Society and the Provision for their Education in the United States." New York, The Macmillan Co. 1919.

In the present study of the field of inquiry in respect to the blind has been limited to the United States, except in so far as an account is necessary of the operations in foreign countries in the way of affording instruction to blind children and of devising a system of raised print, as an introduction to the work in this country. References are accordingly only to American sources, save as to a restricted number of publications in England dealing with the two subjects mentioned, with popular conceptions regarding the blind, and occasionally with other matters.

Dr. Best has handled this subject in an attractive style. While the subject is a dry one he has presented it in such an attractive way that it will not tire any reader who is interested in this kind of knowledge and we all ought to be interested in it. The book contains 763 pages and is very thoroughly indexed.

"Progressive Medicine," a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College. June 1, 1919. Owners and publishers, Lea & Febiger, Philadelphia and New York. \$6.00 per annum.

"Squibb's Materia Medica," 1919 Edition.

A complete alphabetical list of the Squibb Products, including all the articles of the United States Pharmacopoeia 19th Revision) and of the National Formulary (fourth, 1916 edition) together with Non-official Chemicals, Pharmaceuticls and Newer Remedies in general use; setting forth their origin, Latin and English Titles, Synonyms, Physical and Chemical Characteristics, Incompatibilities, Antidotes, Therapeutic Indications Doses, etc.

Also a comprehensive descriptive list of tablets for internal and for hypodermic use; of Biological Products, and of Reagent, including test solutions, volumetric solutions and indicators.

Published for the physician and surgeon by the medical department E. R. Squibb & Sons, New York. Manufacturing chemists to the medical profession since 1858.

Hernia of the Urinary Bladder; Notes of Cases, with Remarks on Strangulation of Femoral Herniae and Its Treatment—Blakeway (London Lancet) says that hernial protrusion of the urinary bladder is a comparatively uncommon complication of inguinal and femoral herniae. Diagnosis cannot usually be made before operation, though symptoms and statements of the patient may suggest it.

This difficulty of diagnosis and its rarity have led in many cases to injury to the bladder during operations for relief of hernia.

The author has operated upon five cases of hernia in which the bladder protruded. Three were males and two females. The ages varied between forty-eight and seventy-one years. All were on the right side, of the direct inguinal variety in two of the males, and of the femoral type in the other three cases. A sixth case was seen in which diagnosis was made without operation.

In all the cases operated upon, the relative position of the sac and the herniated process of the bladder were similar. The bladder protrusion in all cases involved the whole thickness of the bladder wall. It was closely applied to the inner side of the neck of the sac, and in each case was about the size of a walnut. At operation it was always found collapsed and might easily have been accidentally wounded or ligated.

Any thickening about the inner side of the sac of an inguinal or femoral hernia, especially if of long standing, should excite suspicion.

Miscellaneous.

EXAMINATION QUESTIONS N. C. BOARD OF MEDICAL EXAMINERS, RALEIGH, 1919.

Surgery.

Dr. Hubert A. Royster.

1. Give the indications for and describe the methods of blood transfusion.
2. What are the causes of stricture of the esophagus? How would you manage a case?
3. Discuss the surgical diseases of the spleen.
4. (a) Give the treatment of a fractured patella; (b) the pathology and treatment of a sprained ankle.
5. Give the diagnosis and treatment of rupture of the bladder.
6. Name the neoplasms of the testis and treatment for each.
7. (a) How would you treat varicose veins of the lower extremity? (b) Give the etiology and treatment of thrombophlebitis of the femoral vein.
8. Outline your procedure in a pistol-shot wound of the abdomen.
9. (a) Mention the varieties and signs of cataract and the indications for operation; (b) name the nasal accessory sinuses and conditions due to their infection.
10. Define: diaphysis, leukoplakia, hypopadias, skiagraph, bronchoscopy, glossitis, osteomalacia, galactocoele, sequestromy, pyelography.

Pharmacology, Materia Medica and Therapeutics.

Dr. John Q. Myers.

1. What are fluid extracts? (a) How many grains of the drug would be required to make one thousand c. c. of the fluid extract of aconite.
2. In what official preparation of digitalis do we find the diuretic principle?
3. How much stychnine in ten c. c. of the tincture of nux vomica?
4. Name the official preparations of opium with dose of each.
5. Give reason why the use of the tincture of iodine was discouraged as an antiseptic in front line first aid work.
6. Name the antidote for poisoning by (a) strychnine, (b) opium, (c) phenol, (d) oxalic acid, (e) cocain, and (f) arsenic.
7. What are the therapeutic uses of alcohol?

8. Give treatment and prognosis of progressive pernicious anemia.

9. Define briefly but clearly (a) serum therapy, (b) antitoxin therapy, (c) prophylaxis.

10. Write a prescription for the following: (a) influenza, (b) acute gastritis, (c) migraine, (d) sciatica, (e) cystitis.

11. Give briefly the treatment for sprue.

12. How can ophthalmia neonatorum be prevented and how treated?

Answer only ten questions.

Practice of Medicine.

Dr. John G. Blount.

1. What diseases affect the pleura? Give physical signs; how would you differentiate?

2. Name and describe three varieties of angina?

3. What is the etiological factor in the production of scurvy?

4. Describe two varieties of leukemia.

5. What is the significance of an enlarged spleen? In what diseases do you find it enlarged?

6. What is the significance of occult blood in the stools?

7. Give symptoms of pyloric spasm; etiology; treatment.

8. What area of the brain is most often affected by cerebro hemorrhage?

9. Define delusion, hallucination.

10. Define briefly the etiology of eczema.

Obstetrics, Gynecology and Pediatrics.

Dr. E. G. Moore.

1. What is meant by the science and art of obstetrics?

2. Give the boundaries of the true pelvis, mentioning the obstetrical landmarks found therein and state the diameters of its outlet.

3. Discuss the toxemia of pregnancy and outline its treatment.

4. What types of labor would indicate the employment of: (a) pituitrin, (b) forceps, (c) version, (d) "watchful waiting?"

5. What would be your management and method of treatment of: (a) placenta previa, (b) retained placenta, (c) eclamptic seizures, (d) mastitis?

6. What is subinvolution, its principal causes and its treatment?

7. Mention the chief causes of painful menstruation and suggest the means of relief.

8. State the principal causes of con-

vulsions in childhood and give the treatment for the same.

9. Outline the general treatment of entero-colitis in a child one year old and write one prescription for the same.

10. What is spina bifida and what is its prognosis?

Physiology, Pathology and Bacteriology.

Dr. M. L. Stevens.

1. (a) Explain briefly what is meant by nitrogen equilibrium. (b) Is it possible for one who is in nitrogen equilibrium to be gaining or losing in weight? Give reason for answer.

2. What danger may result from transfusion of blood from the veins of one animal to the veins another or from one individual to another? Explain cause.

3. Give briefly the pathology of round-cell sarcoma.

4. Describe the pathologic changes that take place in acute endocarditis.

5. Give the pathology of gastric ulcer.

6. Name three parasitic fungi which are causes of diseases and the disease caused by each.

7. What are protozoa? Name a pathogenic protozoon. Outline laboratory method of examining for same.

8. Define amboceptor anaphylaxis, bacterium, saprophyte, micron.

Note—The written examination will be supplemental by an oral or practical laboratory examination.

Anatomy.

Dr. J. F. Highsmith.

1. Describe the osteology of the head of the humerus. Name the muscles attached to it and describe one of them.

2. What structures would you cut in doing an amputation at the upper third of the femur?

3. Describe the portal circulation; what is the collateral circulation when the portal vein is blocked?

4. (a) Name the chambers of the heart. (b) The valves of heart and give their surface markings. (c) What is the nerve supply of the heart?

5. Give the branches of the common carotid artery.

6. Name the foramina at the base of the skull and the structures transmitted through each.

7. Discuss the anatomy of the uterus and vagina. What is the pouch of Douglas?

8. Give an anatomic description of the bronchial tubes.

9. Name and locate the ventricles of the brain. Where may the cerebro-spinal fluid be normally found? How does it pass from the lateral ventricles to the cord?

10. Explain the following reflexes: (a) Pain in the region of the right shoulder in diseases of the liver and gall bladder; (b) rigidity of the abdominal wall in the acute inflammation of the appendix; (c) pain in the testicle during the passage of a stone from the kidney.

Chemistry and Hygiene.

Dr. Isaac M. Taylor.

1. What is inorganic chemistry? Organic chemistry? What element is a necessary component of all organic compounds?

2. In the purification of drinking water, describe distillation, filtration, precipitation. Which of these is absolutely safe and which is applicable to municipal supplies?

3. What is meant by a chemical antidote, with an example. What is meant by a physiological antidote, with an example?

4. What is the acid constituent of gastric juice? urine? and bile?

5. Give an approved method for determining the presence of glucose in urine. What diseased condition does the presence of glucose indicate?

6. What are peptones and how are they produced? How do the albumins differ from peptones? Give a test for peptones.

7. Describe a chemical test for blood.

8. Describe the appearance of urea and uric acid, and give a chemical test for each.

9. What are the necessary hygienic conditions of a model sleeping room floor area, height of walls, window area, and cubic air space to each occupant?

10. What diseases are preventable by timely administration of sera and vaccines?

Cerebro-spinal Meningitis and the War.

—The year 1915 seems to have been a record one for this affection in France and England. In the one of war activities in France the number of cases was 1073 and in England the incidence was 2566. In 1916 there was a notable falling off in both countries, which was maintained in France, although in England a high morbidity occurred in 1917. Less than half the English cases occurred in soldiers.—Patholgia.

The Climacteric of Life.—Guthrie Rankin submits a clinical survey which shows the importance of the climacteric period of life, not only in women but in both sexes. The history of every life is a gradual ascent from the time of birth till its fastigium is reached, and from that point one of decline until it finds its termination in death. The climacteric period, which coincides with life's full maturity, is the time of special liability to the development of disease, hereditary or otherwise. It is well recognized in women, but it is not so generally appreciated that men go through a similar readjustment of tissues, though probably at a later age. Since at this time the protective powers of the body are less active, acute illness is attended with more than average risk. The immediate counterpart in man of the ovarian changes which take place at this time in women is probably to be found in the structural alterations which become established in the prostate gland. It is not surprising that growths of malignant type so often date their inception from this period of unstable tissue life. Most interest, however, attaches to the chronic ailments met with at this period of life, and the author selects three that are commonly met with in men and three more unusually encountered in women. Although each ailment may be considered as an entity, they are each related to the other and none is really self-contained. Arteriosclerosis, interstitial nephritis, and diabetes form a group frequently seen in men between fifty-five and sixty-three. Each may be regarded as evidence of a breach of tissue integrity, and in all three cases the common causative antecedent is continued strain—domestic trials, financial worries, emotional storms, and mental anxieties. The stress of carrying on falls primarily upon the nervous centers, the result being neurasthenia. More often than not these ailments overlap one another, and all three are frequently seen together, and their close association makes the onset of one almost certainly the prelude of the others. The indications as to preventive treatment are simple: the strain of life must be ruthlessly curtailed; work must be lessened and leisure cultivated; the diet must be adjusted to the necessities of the condition and the capacity of the damaged organs. A weekly grain of calomel will provide for free action of the liver, and periodical small doses of iodide and nitrate of sodium with arsenic will help to keep the blood tension low, and possibly aid in delaying the

thickening of the arterial walls. In cases of interstitial nephritis, the amount of urea in the urine is of more importance than the quantity of albumin. Marked diminution of urea is an evil omen and should be followed by complete rest in bed, a milk dietary, mild alkalis, and free hepatic stimulation. The occurrence of albuminic retinitis is of grave prognostic importance. In diabetes the treatment resolves itself into a suitable restriction of diet and the exhibition of opium. Starvation is not to be recommended in patients of this age; it imposes too great a tax upon the nervous control and imperils serenity of temper and happiness, and in any case the sugar ultimately returns. In younger patients this procedure has much to recommend it. Upon the first appearance of diacetic acid the patient should be put to bed, treated with a more rigid dietary as regards carbohydrates and with a temporary withdrawal of fats, purged moderately, and given bicarbonate of soda with taraxacum in full doses every three or four hours. A reasonable amount of alcohol should be allowed. In women, colitis, rheumatoid arthritis, and hyperthyroidism are the ghosts most to be dreaded at the "change of life." Women as a class are more careless than men in the proper regulation of their bowels and, suffering from constipation, soon fall into the "aperient habit." In time the one of the colon suffers, with colonic irritation as the result. The mucous membrane of the large intestine becomes impaired with displacement of abdominal contents. An ulcerative process may supervene which it is difficult to repair; there are niggling pains, troublesome irregularity of bowels, flatulence, and unpleasant borborygmi. Toxic consequences cause the patient to look ill, impair the general nutrition, and may end in a marasmus almost as pronounced as that produced by malignant disease. Rheumatoid arthritis is almost always rebellious and leads to permanent and characteristic deformity. When the disease invades the vertebral column the miseries and helplessness of the patient compel for a time complete rest in bed. Until the pathological process has been arrested there is constant risk of intercurrent acute exacerbations, when the joints become red, swollen, and painful, to the accompaniment of disturbed digestion, pyrexia, and a condition of neurasthenia. Fibrositis, sciatica, and lumbago are to be feared as hindrances to the progress of recovery. Graves' disease,

though generally met with in an incipient form may pass from that stage to fuller development, and end in exophthalmic goiter. Even in its minor degree it is accompanied by disturbance of the nervous system, and sometimes leads to a mild degree of mental aberration. The thyroid gland may become enlarged apart from any change in the eyes. Every case is associated with a risk of glycosuria, which from small beginnings may end in a permanent diabetes. Intestinal difficulties are common and the colon may prove troublesome. Pigmentary changes in the skin may declare themselves in the form of leucoderma, and patches of alopecia sometimes becomes established on the scalp. The causative influence in all three conditions is probably a toxemia, by which metabolism is more or less seriously interfered with. Treatment, therefore, should be directed toward combating toxic intoxication. In colitis douches are sometimes useful, but they may create an undesirable reflex action upon a nervous system already touchy. Beta-naphthol, bromide of ammonium, and bismuth is a useful combination, to which may be added an occasional dose of calomel or podophyllin. A tablespoon of liquid paraffin should be taken before breakfast every morning. The abdominal wall may be supported by wearing a suitable belt. In rheumatoid arthritis guaiacum is an efficient remedy and should be used in combination with sulphur. The usual treatment by bromides, strophanthus, thyroïdin, and arsenic is indicated in cases of hyperthyroidism. In both sexes, however, the success of treatment lies in convincing the patient that the years are beginning to tell their tale and that a new and more subdued plan of life must be adopted.—British Medical Journal.

Simple Treatment of Scabies.—Milian (Paris Medical) lays stress on the importance of scabies in war practice. He thinks two army corps may yield as many as 500 cases every month, thus removing a large force from active service and entailing great expense for treatment. The official course of treatment, he finds, is too complicated and is frequently misapplied by the attendants. The chief course of difficulty is that sulphur being insoluble, does not penetrate the skin, yet must be brought in direct contact with the parasites if successful results are to be obtained. Milian's simplified treatment is based on the use of a soluble sulphur preparation, and this does

away with the necessity not only of the preliminary rubbing with soft soap and the hot bath, but also of the rubbing in of the sulphur itself, and even of the disinfection of the clothes—if the patient can continue to wear the latter during treatment. The ointment employed is made by mixing 250 grams each of petrolatum and wool fat, incorporated with them a solution of fifty grams of potassium polysulphide in 250 grams of water, and adding five grams of zinc oxide and 200 grams of liquid petrolatum. The odor of this ointment persists only half an hour. The patient first rubs himself with soap in a shower bath or takes an ordinary cleansing bath. The entire surface of the body, with the exception of the head, is then covered with the ointment and the patient dons the same clothes he had on before. For greater certainty, a second inunction may be carried out the next day. On the third day the body is well washed with soap to remove the ointment. The underwear is then changed and, if possible, also the sheets. The ointment is less irritating than those hitherto used and can be used even where furunculosis or extensive impetigo coexists. In the first three or four days the lesions of scabies become larger, due to edema, but the parasites upon examination are found to be dead. In about one case in fifty, viz. in susceptible subjects and those insufficiently cleansed with soap on the third day, a harmless eruption of small papules on the trunk, lasting five or six days, may be noted. In cases with impetigo or furunculosis already present, a paste of equal parts of zinc oxide, petroleum, and wool fat should be applied locally.

Primary Sarcoma of the Prostate.—

Newman (British Medical Journal) records the case of a young man who received an injury to his perineum and testicles. This produced slight hematuria and some difficulty in voiding. Two months later he had almost complete retention of urine. Urine, removed by catheter, contained both pus and blood. Rectal examination revealed a soft, smooth, round enlargement of the prostate. He was subjected to suprapubic cystotomy and the entire prostate was found occupied by a soft fungating growth. The growth proved to be round cell sarcoma. It sprang from a small cavity with well defined walls. The tumor was removed, but in two weeks it had recurred and was of larger size than before.

The important features in this case seem to be the primary existence of a small, well encapsulated sarcoma which had given no symptoms and which perhaps would have remained dormant for a long time were it not for the trauma which caused a rupture of the capsule, and permitted its rapid growth. Further points of interest are the rarity of primary sarcoma of the prostate and the difficulty of diagnosis while the tumor is still sufficiently circumscribed to be successfully removed.

Association of Rickettsia Bodies in Lice with Trench Fever.—

Arkwright, Bacot, and Duncan (British Medical Journal) conclude that very close correlation exists between the presence of rickettsia bodies in lice, or their excreta, and trench fever. They conducted many carefully controlled experiments which show that large numbers of these bodies can almost invariably be found in the excreta or the bodies of lice about ten days after the latter have fled on a trench fever patient. Daily examination of lice after an infecting meal shows evidence of these bodies for the first time on the fifth day, when they are present in small numbers only. Their numbers rapidly increase during the next three or four days. When a box of lice has once become infected with these bodies they continue to be present for periods of two or three weeks, or until all the fedlice are dead. Not all the lice from an infected box show the rickettsia bodies, only a small proportion doing so in the first week, while the great majority are infected by the second and third weeks. The lice can be infected by trench fever patients during the fever, between the attacks, or even several weeks after an attack. Normal lice, fed on persons who have never had trench fever, do not show rickettsia bodies. From these and other experiments, including inoculation tests on volunteers, the presence of rickettsia bodies in lice is shown to be directly associated with trench fever.

Treatment of Seborrhea.—

Ellis (Medical Journal of South Africa) states that seborrheic eczema has every appearance of being an infective disease, probably aggravated by a toxic absorption from some body focus or possibly initiated by this latter cause. Unna claimed that it is a mild eczematous inflammation combined with seborrhea, the intensity of the eczema and seborrhea varying in different cases. It has, however, distinct characteristics

which distinguish it from ordinary simple eczema both in its morphological appearance, its distribution and in the results of treatment. Its clinical manifestations vary a great deal.

Whatever part of the body is affected, seborrheic eczema is practically always associated with a variable degree of seborrhea of the scalp. In many subjects the disease is confined to the scalp but in those liable to the complication of eczema the scalp affection appears to form a nidus from which the disease periodically spreads, producing a more or less generalized eczema.

The author points out four types of the disease:

(1) The acute form of seborrheic eczema which spreads rapidly and has a typical distribution, affecting the face, especially the eyebrow region and the nasal folds, and in men frequently the beard area. Also the ears and periauricular region, the axillae, the sternal area, the flexor surfaces of the elbows and knees, and the folds of the groins.

(2) The psoriasiform variety which simulates the morphological appearance of psoriasis but does not follow the typical distribution of the latter disease in affecting the extensor surfaces of the elbows and knees, which in this type of seborrheic eczema are often not involved. The whole trunk is generally implicated and most of the surfaces of the arms and legs, but the hands and feet are usually not affected. A considerable amount of itching is experienced.

(3) The third variety is fortunately rare, for it constitutes a grave and serious disease. It usually starts with isolated patches, which increase in size, sometimes forming a gyrated outline, and ultimately coalesce till finally every part of the body, from the crown to the soles of the feet, is affected. The irritation in this variety is intense, especially at night, and the patient sometimes exhibits a profound degree of prostration with asthenia. The surface of the skin sheds a branny desquamation with the formation of crusts, which are easily removed, leaving a dark red, highly sensitive denuded surface. This variety is most intractable, often persisting for years in spite of all medication.

(4) The fourth variety is a very chronic form of eczema, lasting not uncommonly for 10, 15 or 20 years. It often remains confined to its original restricted area on account of its chronicity, is frequently accompanied with a good deal of thickening of the skin.

A special kind of eczema should be mentioned affecting children more commonly than adults. It is manifested by medium-sized patches exhibiting a slight, fine, dry desquamation, with practically no reddening beneath. It frequently affects the face, but is also sometimes seen upon the trunk and limbs. It is readily amenable to treatment.

Some authorities maintain that seborrhea of the scalp is only mildly infectious, but it would appear that a disease which is so universally prevalent is probably very easily communicated from one person to another. This communicability of the disease suggests a strong parasitic or microbic element and Van Harlington demonstrated some forty years ago that pityriasis capitis is not a pure seborrhea. The segmental and circinate form of progress of the disease markedly indicates a parasitic origin, whilst the constant primary occurrence of the disease in the scalp supports this view. Various organisms have been described as the causative agent, but their significance has not been definitely established. Unna maintained that it is due to a hypersecretion of oil from the sweat glands combined with a parasitic invasion of the skin. Four factors exist: (1) parakeratosis of the epidermis; (2) epithelial proliferation; (3) inflammation of the derma; (4) augmentation of the fatty secretion of the skin.

The Neglected Therapy of Convalescence.

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the

general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

A Clinical Study of Four Hundred Patients with Bronchial Asthma.—1. Chandler Walker discusses the protein causation of asthma and points out that proteins are most widely distributed in nature and that as patients may be sensitive or anaphylactic to proteins these may be the cause of all varieties of asthma, including the bronchial variety. There are several ways of testing a patient in order to determine whether or not he may be sensitive to proteins. The test which has proven to be safe and reliable as regards hay fever and asthma is performed as follows: A number of small cuts, each about one-eighth of an inch long, are made on the flexor surfaces of the forearm. These cuts are made with a sharp scalpel, not deep enough to draw blood, although they do penetrate the skin. On each cut is placed a protein and to it is added a drop of tenth-normal sodium hydroxide solution to dissolve the protein and to permit of its rapid absorption. At the end of a half hour the proteins are washed off and the reactions are noted, always comparing the inoculated cuts with normal controls on which no protein has been placed. A positive reaction consists of a raised white elevation or urticarial wheal surrounding the cut. The smallest reaction which can be termed positive must measure 0.5 cm. in diameter, and any smaller reactions are called doubtful. Negative skin tests with protein rule out these proteins as a cause of asthma, and all proteins which give a positive skin test should be suspected as a cause of asthma. In the case of bacteria, however, the skin test has only to do with the protein element, so that even though bacteria give a negative test there may still be cause of asthma though their infectious nature and the patient need not be sensitized to bacterial protein. Of the 400 cases studied by Chandler, 191, or 48

per cent., gave a positive skin test, and were therefore sensitive to some protein. According to sex, 53 per cent. of the sensitive cases were males and 47 per cent. were females, and of the total number of males studied 51 per cent. were sensitive, and of the total number of females 44 per cent. were sensitive. The author also emphasizes the fact that the relationship between the age of onset of bronchial asthma and the sensitization of the individual is important. Stated briefly, four-fifths of the patients who began asthma during infancy were sensitive, two-thirds who began during childhood were sensitive; one-half of those beginning asthma during young adult life were sensitive, and none were sensitive that began asthma after the age of fifty; as the age of onset of asthma increases, the frequency of sensitization decreases, and the knowledge of this is a great help in practice. A positive skin test with several different proteins may mean that all of them are causing asthma or that only some of them are causing asthma at present, and that the others have been or may be in the future the cause; or even it may mean that none of the proteins is at present the cause, but they have been and that now secondary infection is the chief cause of asthma. Suffice to say that positive skin tests by proteins, which seem to have no bearing on the cause of asthma, should be considered as danger signals and not as false reactions; such positive tests should not be disregarded. The treatment of sensitive cases is largely a matter of judgment in deciding which positive tests should be first investigated. If the patient is sensitive to food proteins, such foods should be omitted from the patient's diet for at least a month in order to see what effect they have on the asthmatic condition. In Chandler's series of cases nearly all such patients have been relieved of asthma. In a few instances, however, because of the associated bronchitis, autogenous sputum vaccines have been required in conjunction with the restricted diet. Attempts to desensitize the patient against offending food protein by the subcutaneous injection of, or by feeding gradually increasing amounts of the protein have failed. They are, however, reasons for believing that total abstinence from the offending protein for a long interval automatically desensitizes the patient for that protein. Patients who are sensitive to bacterial proteins may be successfully desensitized against such by treatment with vaccines of these organisms.

ms, but great care must be taken not to give too large and too rapid an increase in the amount of vaccine. The first dose of vaccine should not be larger than one hundred million bacteria, and each succeeding dose should not be more than fifty million over the preceding dose.—The Canadian Medical Association Journal.

Avitaminoses in the Army.—Bruntz and Spillman (*Le Progres Medical*), consider this subject very exhaustively. By controlling clinical experience with feeding experiments on animals important discoveries seem to be in the making. Thus it may be possible to bring trench foot under the rubric of a deficiency disease. The subject matter is considered under eight heads. The first section deals with generalities in connection with vitamins, and contains nothing new. The quantity necessary for life may be infinitesimal, but since a certain amount of sterilization will destroy them the most abundant and best balanced ration could be denatured by excessive cooking and preserving processes. Artificially prepared vitaminiferous substances quickly suffice to remedy the deficiency diseases, and are therefore of diagnostic value. The authors mention but two types of deficiency disease, viz., scurvy and beriberi. Such simple and available remedies as beer yeast and lemon juice suffice to make good the severest types of deficiency.

The second section is devoted to the richness of the soldiers' rations in vitamins. These comprise fresh, frozen, tinned, and preserved meats and fish, bread, vegetables, fats, coffee, wine, etc. Which of these foods are vitaminiferous? Meats, both fresh and frozen, breads not made of white flour, potatoes, lentils and lima beans, and new wine. Which are free from vitamins? All tinned, smoked, and salted provisions, sterile milk, and decorticated grains of any kind. The effects of heat must now be added. Foods apt to be damaged by overcooking are roasted and boiled meats and beans, etc. Anything cooked to a crust, whether meat, bread, or vegetable, is damaged as to its vitamin content. Since it is extremely difficult to draw a line here, underdone food, when digestible, must have precedence. The men who have been fed for days on preserved foods rush with avidity upon raw carrots and turnips and unripe fruit when nothing else avails. No scruples stop them in this quest. There is also an instinctive repugnance to foods which contain no vitamins, such as decorticated rice. This is so common as to

suggest a physiological defense reaction.

The third subject for consideration is clinical avitaminosis, but this is quickly dismissed because all are familiar with the phenomena of scurvy, Barlow's disease, beriberi, and pellagra. Next to be considered is experimental avitaminosis. No original work is mentioned, but there is a resume of the recent finds of Weill and Mouriquand. It is demonstrable that two types of deficiency disease can be generated in the same animal at the same time, and this has also been confirmed in human pathology, as cases of associated scurvy and beriberi have been reported.

The fifth section is devoted to the relationship between trench foot and deficiency in vitamins. Certain factors in the genesis of the former are cold and moisture, compression, maceration, neuritis, infection, etc. Interest centers around the element of neuritis—one whose activity seems assured. This is recognizable in animal experiment in which it is able to cause edema. Mild neuritis may also exist without trench foot. The cause of the neuritis is evidently internal, and to a large extent the latter may be regarded as the parent lesion, the others being contributory. The differential diagnosis between trench foot and simple frostbite has long been possible, and different degrees of cold are required to produce the two. Trench foot has been seen outside of the trenches. There is some evidence to show that rice-eating Arabs suffered more promptly and severely than Europeans on regular rations. Trench foot has actually been seen in the warm months, and could then be readily explained by diet. The Japanese had peripheral neuritis before Mukden, which was, of course, frankly called beriberi. The relation of trench foot and edema from underfeeding has not yet been traced.

Sixth, the authors consider all of the war maladies which could possibly be classed as wholly or in part avitaminoses. There are many such, some local and others constitutional, which yield to treatment with vitaminiferous foods. To include everything which is benefited by the lactovegetarian regimen is, however, to go too far. Under the seventh head, prevention, the authors say that the two localities to be kept under observation constantly are the buccal cavity and the feet, while at the same time the diet must be carefully supervised both as to content and degree of cooking. Under actual treatment, the extracts which contain vitamins from whole rice, etc., and foods

rich in the same, should be given. Finally, the authors assert that they have not the least doubt that trench foot is essentially an avitaminosis.

The doctor should always have an hemostatic in his case. There is liable to be need for it any minute.

Thromboplastin Solution (Armour) is a specific hemostatic and acts promptly.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

Treatment of Extensive Septic Wounds.

Gardiner, in *The London Lancet*, contends that the chief use of gauze dressings is to protect wounds from extraneous infection, and that the objectionable features of their use can be avoided if some other means of preventing infection be provided. The following proves more satisfactory. The wound is incised and all pockets are opened up in such a way as to obtain the maximum effects of gravity in carrying away the discharges. Then an ordinary gauze packing is applied and bandaged on for the sole purpose of checking bleeding and oozing. This is removed after forty-eight hours and the wound cleansed by syringing with some mild antiseptic such as boric acid, or weak eusol, solution. A guard of appropriate size and shape is made of perforated zinc and bent to form a cradle over the infected part. This is placed in position and covered by a sterile towel and a bed cradle is put on to hold up the bedclothes. The discharge which runs from the wound is absorbed by a sterile wool or sphagnum pad placed beneath the part. Twice daily, or oftener if the wound is uncovered, syringed and swabbed out, the pad changed, and the zinc cradle, towel, and bed cradle are replaced. This treatment is continued until all pockets are closed by granulations, the whole wound surface is granulating evenly, and the discharge has practically ceased. Then the wound is dressed in the usual way until completely healed. At times difficulties are encountered, such as the inability to utilize gravity fully, or the problem of keeping the part in posi-

tion during sleep. The first of these is overcome by the insertion of a small gauze wick which hangs down over the edge of the wound. The second by the use of a suitable splint. The advantages of the plan are: Perfectly free drainage, absence of tendency to form pockets; absolute painlessness of the treatment; absence of all manipulation of the wounded part, and great economy in dressing materials.

Laxatives and the Physician.

When you prescribe a saline laxative you expect to remove as quickly as possible from the gastro-intestinal tract the retained products of food ingestion and other toxic substances which are harmful to the patient.

The laxative should be prompt and efficient in its action—thoroughly evacuating the colon, if possible, without griping or discomfort.

For such a laxative we recommend PLUTO WATER. It stimulates intestinal secretion and movement and with varying dosage acts as a mild aperient or a free cathartic.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

A Triumph of Preventive Medicine.

The war has been almost from beginning to end a veritable triumph for preventive medicine. In the term preventive medicine is included hygiene and especially personal hygiene. By paying the strictest attention to sanitation in its broadest sense and by carrying out in the minutest details the laws of hygiene, wide spread epidemics have been avoided and the health of the fighting forces has been conserved in a remarkable manner.

The prophylactic treatment of wounds comes within the meaning of the term preventive medicine, and therefore not only vaccine treatment, but all other measures used to inhibit the growth of infectious germs may be comprised under the head of preventive medicine. In the prophylactic treatment of wounds, and of those wounds in particular, in which the presence of anerobic bacteria had been detected or was suspected, it was found that oxygenation was the most potent method of inhibition. Kenneth Goodby, one of the best known bacteriologists of England definitely demonstrated that in the prophylactic treatment of

wounds, their oxygenation as accomplished by their irrigation with peroxide of hydrogen was the readiest and most effective means of destruction. Anaerobic bacteria cannot exist, nor indeed can any bacteria, in an oxygenated atmosphere and consequently the war has taught, as one of its lessons, from the preventive standpoint that oxygenation of wounds should be regarded as a routine treatment. Oxygenation can be most easily and thoroughly done by irrigation with peroxide of hydrogen, and the most reliable form of peroxide of hydrogen is Dioxogen on account of its purity, stability, and oxygen-liberating powers.

In countless homes, factories, offices, etc., Dioxogen is being used for hygienic and first-aid purposes, on the explicit advice of medical men who have learned from their own experiences its efficiency and freedom from all objectionable action whenever and wherever a potent germicide is needed.

Bone Grafting in Ununited Fractures of the Mandible.—Percival Cole and Bubb (British Medical Journal) point out the remarkable progress which has been made in the treatment of fractures of the mandible since the outbreak of the war. Even from under the best conditions for immediate treatment, however, there remain about ten per cent. of the cases in which there is either nonunion or fibrous union, most of which have been discharged from hospital as having had their treatment completed. This is a calamity which results from the failure to standardize the methods of treatment and the results are to be accepted as satisfactory. No ununited fracture of the mandible is cured and, what is worse, the condition is one in which the disability becomes progressively greater as the teeth used for supports are lost. The most satisfactory method of treatment for ununited fracture is by means of the pedicled graft, of free transplants where the former cannot be employed. As a result of experience the technic of the use of the pedicled graft has been modified by the fixation of one or both ends of the graft by wire passed through holes bored in the graft and the ends of the fragments, and by the use of much bulkier grafts than formerly. For success the utmost care must be observed at every step to avoid the slightest possibility of a breach of asepsis. The skin margins should be guarded by towels clipped to them; all sutures should

be tied with forceps instead of the gloved fingers; and the wound must never be touched or handled by anything other than instruments. Certain conditions are necessary to permit the employment of a pedicled graft. First, the site of the fracture must be such that the loss of the bone is in the horizontal part of the body only; second, the gap in the bone should not exceed four centimetres, though where an extra thick graft can be cut a gap as great as six centimetres can be filled successfully; finally, the tissues of the submaxillary triangle on the side from which the graft is to be cut must be free from scar tissue. The graft may be taken from one side to fill a gap on the side if necessary, but this entails considerable dislocation, the use of a very long pedicle, and an increased risk if dislocation of the graft, so that the results may not always be perfectly satisfactory. A very important point in the initial treatment of fractures of the mandible is to avoid the extraction of teeth so far as possible, for the dentulous jaw rapidly atrophies and leaves poor material for subsequent grafting if that should become necessary. A total of thirty-four cases have been treated by the pedicled graft method and of the twenty-three in which the final result was shown over ninety per cent. had been completely successful. This contrasts wherever traces of scarring already exist or would later result from repeated punctures. In this category may be placed cases already presenting sinuses and cases with very marked lymphatic enlargement constituting a more conspicuous defect than a mere incision scar. To obviate recurrence, any existing dental or pharyngeal lesions should receive careful treatment.

Plans are being made by Armour and Company for the renewal of the medical examinations of 12,000 men and women working in the Chicago plant of the company. This means of safeguarding the health and safety of the Armour workers is not new but was discontinued during the war because of the urgency of orders placed to keep the fighting forces supplied with food and the enormous amount of extra labor needed.

Dr. Volney S. Cheney, chief surgeon, and his corps of assistants will have charge of the huge task. Every worker in the plant will be examined free of charge. The value of visiting a doctor at least once a year for a medical examination to discover any defects in health

which may be easily corrected by treatment is recognized generally by persons of means who visit their doctors regularly so that they may know in just what state of health they are. Armour and Company through their welfare bureau and their staff of doctors offer this service free to their many workers, and in case defects which have interfered with a man's work are brought to light, the man or woman will be transferred to some other task in the plant which, in the opinion of the medical men, they are better able to perform.

Administration of Arsenic in Syphilis.

—Lockhart and Atkinson point out that the methods of administering the organic arsenic preparations are almost invariably of a too elaborate character. Moreover, the drug is too unstable to retain its therapeutic properties when given in the form of capsules to be administered per os or introduced into the rectum. The authors have adopted in their clinic at the Canadian Special Hospital, Whitley, England, the intravenous method of injecting arsenic introduced by Professor Thibierge. The method of administration is as follows: A 30 c.c. burette containing the sterile water is held upright by a stand and is continued at the bottom by a short piece of rubber tubing terminating in a glass nozzle and closed by a pinch cock. One of the orderlies flames the outside of an ampoule of the drug with a small alcohol lamp, files off the tapering end, runs in 2 c.c. of water from the burette and inserts a piece of small glass tubing with rubber connection at one end and a few filaments of wood at the construction near the center, such as is supplied with the galy ampoules. The ampoule is then gently shaken. Solution is complete in a few seconds. The ampoule is placed upright in a small board which has had sufficient half-inch holes drilled in it to hold the required number of ampoules. The officer having picked a syringe out of a small basin of alcohol with dressing forceps, washes it in sterile saline solution, aspirates the contents of the ampoule by means of the rubber connection to the glass tube, picks out one of several needles which are boiling in a container beside him, and adjusts it to the syringe. Meanwhile the other orderly has prepared the patient by fastening a light rubber tube around his upper arm and painting below the bend of the elbow with iodine. The patient seats himself at a narrow table

on the opposite side of the officer, his arm resting on the table, the officer steadying the skin with the left hand, introduces the needle into the vein, the lumen of the vein, and, removing the tourniquet, completes the injection. The table should be so placed that the light falls freely on it. The needle puncture is so small that no bleeding takes place and no cotton or colodion is required to seal it. During the past three months 2,895 intravenous injections have been given in the above manner in the Whitley clinic. There has not been a solitary case of thrombosis of the vein. There have been no early reactions of an anaphylactic character such as used to be fairly frequent when injecting large quantities of distilled water, which was not above suspicion. There have been no reactions, late or early, which could be attributed to the method of administration. Owing to the small size of the needle the pain of introduction is less than where the larger needle required by the gravity apparatus is used, and much smaller veins may be successfully entered. A microscopic examination of blood withdrawn from the vein into the syringe containing the arsenic solution shows the blood cells apparently even some hours after withdrawal. The drugs used by the authors have been Novarsenobillon and Novarsenobenzol, which have been supplied in ampoules containing 0.6 gm. and 0.9 gm. It has seemed to the authors that the administration of arsenic in concentrated solution is more effective than when it is given diluted. It has been shown that intravenous arsenic as ordinarily administered is eliminated pretty rapidly by the kidneys so that a large part of the dose is disposed of in this way within a few hours after administration. The diuretic effect of the distilled water and saline solution introduced into the circulation along with the arsenic may have something to do with this, and it is reasonable to suppose that when the dose is given in concentrated form it is less rapidly eliminated. There are no means to estimate quantitatively the arsenic in the urine and therefore it has been impossible to verify the supposition. When arsenic is administered by a gravity apparatus it is customary in large clinics, at any rate, to dissolve the doses for several patients at once, and as the solution is run out more is continuously added during the period of an hour or longer according to the number of patients. It is clear that in this way some portion of the drug will be exposed to the air for a

considerable time, as the tube is never allowed to entirely empty itself, and some degree of oxidation is bound to occur. Where solution is effected in the ampoule immediately after it is opened and the contents injected within a minute or less, oxidation prior to administration must be very slight indeed. In default of support from estimation of the rapidity of arsenic excretion it must be admitted that a number of cases is too few and the period of observation too short to establish the truth of the supposition that concentrated solution of arsenic is more effectual than dilute, but there is sufficient evidence to show that by their use syphilitic lesions undergo very rapid involution, and that their administration in suitable dosage is perfectly safe.—The Canadian Medical Association Journal.

The Successful Treatment of Influenza.

The remarkable success that has attended the systematic use of Burnham's Soluble Iodine in the treatment of influenza during the current epidemic, has emphasized again the value of this remedy in the treatment of the acute infectious diseases generally.

The results that have been obtained in influenza have been uniformly satisfactory, and used sufficiently early and in proper dosage, it has served not only to reduce the severity of countless cases, but also to limit their duration. The development of complications has been lessened to a marked degree and recovery without any unpleasant sequelae has rarely failed to follow in a few days.

In fact, in the hands of a great many physicians, Burnham's Soluble Iodine has seemed to possess almost specific properties, in this epidemic type of influenza. The custom of many practitioners which has been most uniformly successful, has been to start at once with large doses on the principle that we have a mixed infection to contend with, and that it is of the utmost importance to increase phagocytosis and raise the resistance as quickly as possible.

When temperature is 101 to 104 or higher, not less than 30 drops should be given either internally or hypodermatically every three hours until temperature recedes. When given hypodermatically, it should be injected very deep in the gluteal muscles, 25 per cent. dilution in sterile water, or full strength if necessary. The temperature usually subsides after the second or third dose, then the dose can be diminished to 15 or 20 minims by

the mouth every three or four hours. Many virulent cases complicated with pneumonia have been saved by this treatment.

Free Iodine will not break down healthy tissue whether given by the mouth or injected. Burnham's Soluble Iodine combats the anti-ferments, stimulates cell and glandular activity and oxidizes toxins.

Write for further information, if desired, to Burnham Soluble Iodine Co., Auburndale, Mass.

Vacation Rheumatism

Someone has said that after a vacation, one should take a nice long rest. He was a wise man and very probably one of the millions who know that vacations often leave people more tired at the end than at the beginning.

Vacations, moreover, cause an abrupt change in a person's daily routine. The individual plunges into a new environment which necessitates an entirely new order of living. His diet undergoes complete modification—and usually means the consumption of many things he avoids at home; he suffers exposure to the elements; he indulges in undue physical exertion, relaxing from the confinement of his "all year" indoor life and sedentary habits, and goes to extremes in his effort to "have a good time". The result is not only great fatigue and lameness, but very frequently an attack of muscular or articular rheumatism is precipitated. Especially is this apt to occur in those having a rheumatic, or the so-called uric acid diathesis. Acute myalgia lumbago is particularly prone to develop posture after exertion.

First and foremost, the pain must be relieved and by a therapeutic agent which, while acting as an anesthetic, will not depress normal functional activity. The natural combative forces of the system must be maintained and encouraged and Phenalgin has proven invaluable in these cases, since it not only relieves the pain but in no way interferes with organic and functional activity. It promotes secretion—a very essential result in these conditions. Although its anodyne effect is prompt and satisfactory, the action of Phenalgin is not that of the opium derivatives and no untoward results follow its administration. Continued use does not induce a drug habit nor cause inhibition of normal function.

Phenalgin, in fact, by relieving pain at once, and reducing nerve excitability, al-

lows the natural resistive and reconstructive forces of the body to overcome abnormal processes and restore normal conditions.

Muscular, and even articular rheumatism, are much more common as a result of vacation indiscretions or mistakes than is generally realized. Careful consideration will justify this statement and emphasize the importance of taking steps to prevent the occurrence of rheumatic ills during vacations, or promptly relieving them at their first manifestation. To this end medical men should not fail to give their patients a supply of Phenalgin to have with them on their vacation trips.

Phenalgin may be prescribed without using special blanks, forms or the keeping of special records and individual data, as it does not fall within the requirements of the Harrison Law. The advantage to the busy practitioner needs no comment.

Richter's Contraluesin and Its Practical Significance.—Scharff (Archives Urologiques) says that salvarsan is not so efficacious or so harmless as Ehrlich and his co-workers have maintained, and as mercury is, after all, the main remedy in syphilis, Richter undertook to bring it to a more efficacious therapeutic form. He approached this problem from two points of view: Firstly, to obtain mercury in a new colloidal form and secondly to increase its curative powers by combining it in artificial serum with various specific substances exerting their specific action in the organism on the spirochetes. Richter's contraluesin is a combination of gold amalgam with salicylic acid, sozoiodol, quinine and sublimate. Scharff points out that although gold has for a long time been known as an anti-syphilitic its combination with mercury may under conditions cause bone necrosis and periostitis and may give rise to the Jarisch-Herxheimer reaction. It is very curious that gold is an antidote to mercury. It is true that both drugs possess similar relations, as for example, between morphin and belladonna which, although antidotal in one respect, fortify the action of each other in another respect. Gold and mercury both exert their specific bactericidal action in common and yet through their antidotal action, one on the other, diminish their toxic properties for the organism. However, in contraluesin the combined sublimate is the potent anti-luetic substance.

The experience that he has had with contraluesin extends over a period of three years and he finds, in agreement

with Scholtz that its absorption is more rapid, in fact, than that of mercury salicylate. In the usual dose administered—1.5 c.c.—containing 0.15 gm. of mercury, he never observed any signs of gingivitis, stomatis or entritis. Scharff employs contraluesin more energetically than Richter does. He gives eight or ten injections, in the course of six or eight weeks. After the first four to six injections he allows an interval of from ten to fourteen days in order to observe the reaction on the part of the body. The succeeding injections are given at greater intervening periods (6-8) days). The doctor's experience has convinced him that ten injections are not sufficient to bring about an abortive cure. Of 52 cases treated by Scharff with contraluesin he succeeded in obtaining an abortive cure in twelve. These were treated with 7-8 injections of contraluesin and 2 or 3 injections of salvarsan. In these cases the Wassermann reaction still remained negative, one and one-half years later. Scharff is of the opinion that contraluesin is a valuable addition to the treatment of syphilis.

Ventral Decubitus in the Reducing of Subtrochanteric Fractures.—Constantini and Vigot (Paris medical), point out that in fracture of the femur below the trochanters there is much displacement of the bone fragments. The upper fragment is forcibly drawn forward and outward by muscular action, threatening the integrity of the formal vessels, while the lower fragment sags downward in recumbency and is drawn toward the ischium, behind the upper fragment. Reduction is difficult because there is no purchase with which to remove the upper fragment must be considered immovable and the lower fragment brought into line with it as best one may. The ordinary procedures employed to this end, such as a sitting position of the patient or some mode of suspension of the limb, proved disappointing in the author's hands. They had complete success, on the other hand, by the use of a table with removable cross slats, the patient being placed in ventral removed, and the affected limb allowed to hang through the resulting gap, with the foot held up near table by a loop of bandage about a foot long. Direct inspection of the bones in three cases with accompanying extensive wounds of the soft parts showed that in this position the two fragments came directly into line. A large plaster cast, embracing the pelvis,

root of the normal thigh, and the affected limb down to the ankle was then applied in this position. The fragments were thus held at all times in perfect alignment and the patients' sufferings wholly relieved.

The Treatment of Extensive Septic Wounds.—Gardiner, in *The London Lancet*, describes a method of treatment for septic wounds with extensive discharge without a permanent dressing. Incisions and openings are made as usual but with the idea of obtaining the maximum effect of gravity in the subsequent treatment. The wound is then packed with gauze and bandaged in the usual way in order to stop oozing of blood. Forty-eight hours later all dressings are removed. The wound is syringed with a mild antiseptic, and a guard of perforated zinc cut to appropriate size and bent in the form of a cradle, placed over the wound and covered with a sterilized towel. If possible, an ordinary cradle is placed over the whole. The discharge is allowed to run out from the wound and is taken up by a sterile pad of wool or spagnum moss, placed so as not to touch the wound. The wound is then syringed and swabbed at intervals, on an average twice a day. This treatment is continued until all pockets and recesses have been closed by granulation, the granulated surface is smooth, and the discharge has practically ceased. The wound is then dressed in the ordinary way with gauze and wool. The difficulties experienced in this method of treatment have been threefold: (1) The difficulty of arranging the wound by operation for opening pockets and of altering the position of the patient so as to obtain the greatest effect of gravity; this may be partly overcome by the judicious use of gauze wicks and by frequent cleansing of the wound by syringing. (2) The difficulty of continuing the treatment at night, when patient is restless. The limb may be placed in a splint or an ordinary dressing and bandage applied at night. In some cases a rampart of spagnum moss may be built up round the wound and kept in place with a towel or bandage. The advantages of the method indicated are: (1) Perfectly free drainage. (2) Absence of tendency to pocket, provided the wound is exposed and arranged so as to allow gravity its maximum effect. (3) Absolute painlessness of dressing even the most extensive wounds. (4) Dressing can be performed without manipulation of the wounded part. (5) A great economy in dressings

is effected. The author points out that the edges of wounds so treated may tend to become hardened and small scabs may develop. These should be removed at once and can usually be prevented from forming altogether by careful cleansing and swabbing of the wound. In case of deep pockets in the wound, a rubber drainage tube should be employed to prevent premature closure.

Diagnosis of Syphilis.—Meldon (*Dublin Journal of Medical Science*) states that notwithstanding the various reports to discredit the reliability of the Wassermann test from a theoretical standpoint, clinical experience has demonstrated that the Wassermann reaction is a reliable clinical test for syphilis. So far as syphilis of the central nervous system is concerned a positive Wassermann in the cerebrospinal fluid is practically conclusive evidence of syphilitic disease of the nervous system, the only exception being in the case of a patient with a positive reaction in his serum who is suffering from a non-syphilitic meningitis. A negative Wassermann reaction indicates that the nervous system is not involved, with the following exceptions: (1) In very early acute meningitis, during the secondary stages the fluid may be examined before it has had time to become positive. (2) The fluid may become negative owing to treatment, but on account of the disease not being fully eradicated relapse is possible. (3) In some cases of purely cerebral lesions the fluid drawn off by lumbar puncture may be negative.

Regarding treatment of syphilis, the method that the author adopts is to give a course of some six or eight injections of salvarsan or neosalvarsan, combined with mercurial treatment extending over a period of about twelve weeks. In early syphilis this may suffice, but in later cases more treatment may be required. There is one point in the treatment which requires special mention and this is the local treatment of the chancre, for it is here that there is most danger of some spirochetes escaping and giving rise to a recurrence. In nervous syphilis experience has shown that intravenous injections of salvarsan and neosalvarsan are just as effective as intrathecal injections of salvarsanized serum.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods.

Removal of Projectiles from the Mediastinum or Its Vicinity.—Rene de Fort (Bulletin de l'Academie de medecine) presents a report of 100 operations on ninety-seven men, for the extraction of 106 missiles. In 1916, operations for the removal of thirty-five missiles were successful in 77.1 per cent of instances. In 1917, fifty missiles were dealt with, with success in eighty-six per cent. In 1918, twenty-one missiles were sought, with 100 per cent success. The progressive improvement in the results is ascribed in the first place to the giving up of narrow routes of access—in particular, of the posterior route. The latter route was unsuccessful in 33.3 per cent of fifteen operations; the narrow transpleural route and the transsternal route in 21.4 per cent of twenty-eight operations, and the broad transpleural route, with costal flap containing a large section of one rib, in 8.7 per cent of fifty-seven operations. The advantages of the broad transpleural operation are even more plainly apparent from the fact that this mode of access was employed in the most difficult cases. The second cause of the improvement in results was a betterment in technical facilities. All available mechanical devices should be brought into requisition, include the La Baume-Pluvinel apparatus, the electrovibrator, and the various measuring devices. Especially important is a preliminary complete X-ray examination of the patient and the use of radio-scscopy during the operation. Daylight is necessary for the operative work, but the X-ray may be resorted to by the intermittent screen method or the use of an X-ray hood by an experienced radiologist. The aggregate operative mortality in the three years was seven per cent, but in 1918 it was nil, in spite of the fact that many bad cases were dealt with in the latter year. The operations involved removal of missiles from the heart cavities or parietes, the pericardium, the aortic and esophageal regions, the anterior and posterior mediastinums, the pedicles, vilums, and ligaments of the lungs and pleura and in but five or six instances did ooze from the wound persist.

Sudden Death after Intravenous Injection of Neosalvarsan.—Doctors Courtois-Suffit and Giroux, in the Gazette des Hospitaux, published an account of a very unfortunate occurrence that took place in the office of a Paris physician. A young married woman, thirty years of age, affect-

ed with syphilis, had consulted this physician with a view undergoing energetic treatment. Clinical examination as well as a positive Wassermann left no doubt of the nature of the malady and a course of intravenous injections of novarsenobenzol was undertaken, commencing with small doses, and increasing gradually at intervals of between eight and ten days. Shortly after the eight intravenous injection, the patient suddenly complained of feeling ill, convulsions supervened, pulse became small, respiration stertorous, and, despite the usual emergency measures, such as injections of adrenalin and of camphorated oil, artificial respiration and so forth, the patient expired two hours after the intravenous injection had been administered.

Suit having been brought by the family of the patient against the attending physician, Doctor Courtois-Suffit was charged with making the autopsy which, though, gave negative results throughout.

Since the fatal accident had not taken place until after the eighth injection, it is hardly proper to assume an arsenical intoxication, for the reason that, in intravenous injection of arsenical remedies, the elimination takes place promptly. Anaphylactic or anaphylactoid accidents, small intravascular coagulates that can not be discovered during the autopsy, may, on the other hand, explain the death in this instance.

The writers conclude by declaring that they have no desire whatever to criticize the therapeutic procedure of administering novarsenobenzol by intravenous injection, since the efficacy of this method is indubitable and the clinical results are remarkably rapid and good. Moreover, such serious accidents, fortunately, are extremely rare.

Medical Inspection in Schools of Great Britain.—Roberts reviews the development and scope of medical inspection of school children in Great Britain.

Medical inspection of school children is now compulsory, and is nominally in charge of the Board of Education, but the actual work and immediate supervision are conducted by medical officers, inspectors of physical training, school nurses, physicians and dentists. Every child is thoroughly examined and defective children are segregated from the rest and educated apart from the normal children. Special attention is also given to the blind, deaf, crippled and incorrigible children. Eye and ear defects are noted

and remedial measures recommended. Specialists are employed on a part time basis for the treatment of eye, ear, nose, throat and skin diseases. Many dentists are employed both for inspection work and for treatment. Special attention is given to the feeding of necessitous children, as well as other children who desire a warm and wholesome midday lunch on the school premises at a minimum cost. Part of the work is the inspection of schools, and recommendations for improving old structures and for designing new ones.

Roberts reports on the condition of the ventilating system, the nature of the desks and benches used by the children. Inquiry is also made into the effectiveness of the lessons on personal hygiene that are taught in the schools.—Bull. Bureau Education, No. 49.

Gunshot Injuries of the Elbow-Joint; Treatment by Early Excision—Shepherd, in *The British Medical Journal*, says that injuries inflicted in the region of the elbow-joint of necessity vary with the nature of the missile, the degree of sepsis, and the amount of damage to bone and soft parts. The ultimate results of injuries to the elbow-joint by gunshot cannot be regarded as satisfactory, as in the majority of cases there is complete ankylosis. Even if the wound remains aseptic, bony out-growth will in the long run inhibit movement to a considerable degree.

When the bones entering into the formation of the elbow-joint are badly comminuted, sepsis spreads in the surrounding parts and the patient shows signs of septic absorption. Whatever method of combating infection is undertaken, the results are the same, affording risk to both life and limb.

Primary excision of the elbow for tuberculous disease, fracture, dislocation, etc., yields good results and it would appear feasible that equally good results might be obtained by early excision of wounded joints. The degree of sepsis in the surrounding tissues forms no contra-indication to immediate excision. The amount of bone to be removed depends upon the nature of the primary injury.

In an early series in which the humerus was removed just above the epicondyle with the whole head of the radius and ulna, movement was long in returning. In a later series the lower end of the humerus was removed above the epicondyles and rounded well off, preserving the radius and ulna intact and not interfering

with the attachment of the triceps to the ulna through the angled incision of Kocher.

If the amount of sepsis was great the wound was left open and treated with eusol gauze or the Carrel-Dakin method, the arm splinted at right angles until sepsis subsided. In milder cases the wound was partially closed.

The splint is left off as soon as the wound has healed and motion is encouraged.

The results, even in septic cases, were surprising, the patient being out of bed early and movement encouraged by the end of the fifteenth to the eighteenth day. The author states that the earlier the excision is performed, the more certain is the patient to have a good and serviceable arm with free movement.

Serum Dosage in Diphtheria.—Comby (*Presse Medicale*) issues a warning against hesitation and delay in the treatment of diphtheria by antitoxin. Often, in insidious forms of the disease, the child has already been ill three to five days before the physician's initial visit, and even then the physician will frequently withhold specific treatment another day while awaiting a positive bacteriologic diagnosis. In severe cases the amount of antitoxin administered is often unwarrantably small, through apprehension of anaphylactic manifestations. The ratio of cases with such manifestations in Comby's experience has been but fifteen per cent., but even if this ratio were exceeded, the resulting erythema, urticaria, arthralgia, or fever are trifling and ephemeral, and death from this reaction never occurs. A mere suspicion of diphtheria indicates immediate serum injection, without waiting for the results of the bacteriologic examination. Even in subjects who have previously received serum, a large dose—never less than twenty mls of the French official antitoxin, should be given at the start. In severe or tardily cases, the dose should be from forty to 100 mls, to be repeated within twenty-four hours if necessary. A child of three years, seen on the fourth day, received 120 mls in thirty-six hours, and a girl of fifteen, 600 mls in the course of a few days. Under such doses the throat and nasal fossae rapidly clear and apparently hopeless cases recover. Serum reactions seem less frequent and marked after large than after small doses. Large doses, moreover, are therapeutically all sufficient, rendering throat irrigations and ap-

plications, with the attending discomforts in small patients, quite superfluous.

Prepare the Babies for Hot Weather

During the month of June it is not a bad plan for a physician to take mental "stock" of the babies under his care, especially such as are bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those whose nutrition may be below par, so that they may enter the trying summer months in the best possible condition to ward off or withstand the depressing influences of extreme heat or the prostrating effects of the diarrheal disorders of the heated term.

Careful attention to feeding is, of course, a *sine qua non* and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hematologic standpoint. The marmasmic anemic baby deserves special attention in the way of building up and restoring a circulating fluid which is deficient in red cells and hemoglobin. In the entire *Materia Medica* there can be found no direct hematic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few weeks' treatment with appropriate doses of Pepto-Mangan very frequently establishes sufficient resisting power to enable the baby to pass through the hot summer without serious trouble, gastro-intestinal or otherwise.

Diagnostic Value of Moro's Percutaneous Inunction Test and Von Pirquet's Cutireaction Test.—Allan (Glasgow Medical Journal) notes that Moro's test consists in rubbing into a limited area of skin an ointment containing Koch's old tuberculin, while the Von Pirquet test consists in the inoculation of a solution containing Koch's old tuberculin through an abrasion made in the skin, e. g., by means of a metallic perforator. He reports his experiences with these tests at the Bellefield Sanatorium, Lanark, the Moro test having been conducted alone in twenty-one cases, the Von Pirquet in twenty, and both tests in three. When these tests are applied in cases in which tubercle bacilli have been found and to cases presenting

evidence of phthisis on physical examination of the chest, one may be at first surprised to obtain negative results. If the cases are advanced, however, and show pyrexia, one need not be surprised, for it is known that such cases fail to give a reaction. Slight or early cases give the best response. Where a positive reaction is obtained in cases in which the bacteriological report is negative, it should be remembered that failure to detect bacilli is not conclusive proof of the absence of tuberculosis. The same applies in the case of a negative result from auscultation and percussion of the chest, as even a skilled physician may fail to detect a lesion. From a positive reaction one may conclude that the patient harbors tuberculosis, but not that it is necessarily active.

It has been estimated that the purification of all water supplies, perfect sewerage or rigid screening and supervision of out door closets would result in the reduction of the annual typhoid fever rate to a figure less than 14 per 100,000.

Below this point, further reduction to the residual typhoid horizontal must be attained by thorough supervision of all cases of typhoid fever, protection of milk and other food supplies from typhoid bacilli, destruction of flies and their breeding places control of typhoid carriers and the use of antityphoid vaccine.

Typhoid fever can never be eliminated as a menace to public health so long as gross pollution of the food and water supplies exists. That its sinister influence may be materially modified by antityphoid vaccination even under the most adverse circumstances has been proved by the experience of the American forces in France. With bad sanitary conditions and no antityphoid vaccination, there should have been more than 100,000 cases of typhoid fever among the men of the American army. With the worst of sanitary conditions, with exhausted troops whose resistance was at low ebb from heavy fighting and privation, but all vaccinated against typhoid and paratyphoid infections, there was only a little more than 1,000 cases according to the available reports.

The conclusion is therefore obvious that antityphoid vaccination establishes in the individual a relatively high resistance at least, and while it is true that this resistance may be overcome by a massive and continuous ingestion of the typhoid organisms, it remains the most valuable personal prophylactic measure

that we possess. It is now entitled to take its place along side of smallpox vaccination and diphtheria and tetanus antitoxin administration.

Its use should therefore be stimulated by every possible means. In particular no one who is especially exposed as are nurses, doctors and persons who travel about should neglect this measure of protection against a chance infection. The physician who assists in this propaganda by urging antityphoid vaccination upon his clientele will find in the Eli Lilly & Company Typhoid and Typhoid Mixed Vaccines prophylactic agents whose use will justify the procedure in the results obtained not only in the eyes of his patients but in the opinion of many others thus increasing the growing circumference of its application among civilians, and the final elimination of the disease.

Preoperative Demonstrations of Malignant Metastases.—Whiteford, in *The London Lancet*, mentions a case in which silent metastatic growths were demonstrated roentgenographically in the mediastinum in a patient with an otherwise easily operable cancer of the breast. The writer then emphasizes the fact that the thoracic cavity may be the site of early, silent metastases in nearly every form of malignant disease. These metastases can usually be demonstrated by means of radiography, and their discovery will save many a patient from utterly useless operation and will improve the recovery records of early radical operation. It should also be possible to demonstrate metastases in other regions than the thorax. The examination for such metastases should be made as a routine before operation is undertaken.

Cranioplasty.—Dufourmentel (Paris Medical) believes the use of a metal plate to be the only procedure affording an assurance of stout protection of the underlying soft tissues in extensive wounds of the cranium. His mode of operation is effected in two stages. In the first, which may be carried out under local anesthesia, the opening in the cranium is exposed either by incising the scar or by making a flap. The scar in the dura may or may not be incised. The essential step is to carefully expose the margins of the bony opening. An impression of the opening is now secured with a block of wax previously sterilized by boiling and allowed to cool until soft—to about 40 degrees C. The wound is then temporarily closed

with a few tissue clamps. Next the case is taken to a dental or other appropriate laboratory, where a plate of gold or other chemically resistant metal is made from it; for large openings, aluminum is best fit precisely in all the irregularities of contour of the opening. It may or may not be perforated to facilitate adhesion of the adjacent tissues. The plate covers the bevelled bony margins and rests solely upon them. The second stage, which is very simple, takes but a minute or two, and is carried out a day or two after the first, consists in removing a few clamps, introducing the plate under the skin to its proper position, replacing the clamps, and applying a sufficiently firm dressing. The tissues adjacent to the plate subsequently hold it in place just as they would fragments of bone or cartilage. Tolerance of the plate for an indefinite time can be expected. That osteoperiosteal or bone transplants may lead to restoration of bony continuity in cranial wounds remains to be demonstrated; meanwhile the metallic plate is the best corrective device.

A Vertible Prop

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e. the blood itself. To construct new red cells, and reconstruct those which have become dehemoglobinized by disease nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to reconstruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

Syphilis.—Dudley, in *The London Lancet*, made a study of the laboratory and clinical data regarding primary syphilis and reaches the following conclusions:

With the systematic use of the laboratory methods a certain diagnosis should be obtained in practically every case of primary syphilis. Clinical diagnosis is so

uncertain as to be practically useless. This was recognized long before the present-day methods in the of dteaching that syphilis should diagnose itself by the appearance of secondary signs. This old doctrine nowadays approaches malpractice, yet it is by no means dead.

The luetin reaction is useful in a few cases in helping to decide whether an apparently early infection is not really of long duration.

For an ordinary early case of syphilis two or three doses of salvarsan, or one of its substitutes, followed by a long and thorough course of mercury is a good routine treatment.

When possible the treatment should be controlled by periodic examinations of the blood and cerebrospinal fluid when in a few instances the call for more intensive methods of treatment may be anticipated.

After being closed for two years due to government restrictions prohibiting visitors from the stock yards because of the war, Armour and Company's huge plant in the Chicago Stockyards is again open to visitors, an announcement from the company states.

This announcement will prove of interest to not only people who intend to visit Chicago some time this summer but to many others as well because, the announcement says, "preparations are being made by Armour and Company to open their other plants in various parts of the country so that a trip through a packing plant which is an educational one, will not just be limited to Chicagoans or visitors to Chicago, but to people in fifteen different parts of the United States, where Armour and Company have packing plants. Uniformed guides are in attendance to explain the various interesting things to be seen."

Vitiligo—Harrington (Lon. Md Press) gives a definition of vitiligo as being "an acquired cutaneous achromia, exhibited in single or multiple, variously shaped and sized patches, unaccompanied by textural changes in the skin, and usually bordered by tissues exhibiting pigmentary excess" (Hyde and Montgomery). In his cases the pigmentary excess was not marked in all, but the patients were naturally dark-skinned, and excess of pigment was not so easily seen. Vitiligo gives rise to no symptoms, and, except for the disfigurement it may cause, is of no importance. Its etiology is obscure,

but the question of a nervous origin has been raised. It has occurred as early as the age of 4, and is said rarely to attack those over 30 years. One of these cases was aged 33 years, and another 49, when the vitiligo first began, but in the remaining two it appeared at the ages of 11 and 24 years respectively. In three of the cases, it is interesting to note, the disease made its first appearance soon after a severe illness. In all, the course was the same. The disease began as small round or oval white spots, gradually increasing in size, and colaescing with other patches till large areas were affected. In none was there any notable loss of pigment in the hairs.

Children and Cod Liver Oil

A quality of most cod liver oil preparations which makes them objectionable to children, is their unpalatableness, which becomes marked as the patient continues with it. As a result of this obnoxiousness of the average cod liver oil preparation, the choice of one for continued use for children is a matter of the utmost importance.

In Cord. Ext. Ol. Morrhuac Comp. (Hagee) the physician has a preparation of cod liver oil which is effective therapeutically and at the same time palatable to the most fastidious taste, making it the ideal cod liver oil preparation for children. While Cord. Ext. Ol. Morrhuac Comp. (Hagee) is palatable and may be administered for long periods, it is just as effective as the plain oil, containing every therapeutic property of the plain oil.

Dear Doctor: The use of radium in the practice of medicine, has gained more and more prestige. Literature dealing with the curative-action of radium, appears in the medical press all over the United States and also in Europe.

There is at present, still a divergence of opinion with regard to the best application. However, we want to point out that both methods: irradiation and emanation-therapy have their specific sphere.

In neo-plasms, irradiation is indicated, but in the large domain of organic diseases and metabolic disturbances, the emanation-treatment, stands pre-eminent.

Hypertension due to arterio-sclerosis, hypo-tension due to anæmia and consequent loss of tone in the myocardium, angina-pectoris, uric acid diathesis, rheu-

matism acute or chronic, arthritis in all stages, gout, chronic periostitis, cirrhosis of the liver, chronic constipation, auto-intoxication, sciatica, neuralgia, diabetes, etc. All these conditions are remarkably improved under the proper administration and dosage of radium-emanations.

Radium-emanation is like any other therapeutical agent and the success from a therapeutical point of view, depends chiefly upon its proper application dosage and supervision of the physician.

We shall be very glad to supply you in suitable cases and you can always consult with our medical expert who is a graduate physician and who has ten years experience with all the forms of radium-therapy. Any information you may desire, will be gladly and promptly supplied.

Very respectfully yours,

A. H. WEARNER M. D.
Radium Limited, U. S. A.

Radium Institute of London.—The Radium Institute has been hampered, like many other forms of medical activity, by the difficulty of maintaining a full staff during the war, but now with an approach to a return to peace conditions we may hope that it will be possible to carry on the work with less difficulty. The annual report for 1918, which has just been issued, is an interesting and promising record. The need for a pathological research department at the Institute has been felt for a long time, but it was not possible to find suitable officers during the war, with the enormous demand by the army on our pathologists. Now the committee has appointed Dr. J. C. Mottram, formerly of the Cancer Department of the Middlesex Hospital, as director of a chemico-physical laboratory, with Mr. J. R. Clarke as his assistant. This is a very definite advance in the scientific study of radium, whose behavior, both in natural history and in medicinal happenings, requires intensive study.

The deeds of the Institute during the past year appear in the report in clear and modest terms. In the report for 1917 chief attention was devoted to the subject of malignant disease, but the utilities of radium in a more extended sphere of therapeutics are now dwelt on. As far as malignant disease is concerned, it is worthy of note that it has been found better in certain cases to apply for a short time an amount of radium much greater than would have been thought safe a year ago. The beneficial results are more rapid

in their appearance and more permanent than those which follow upon prolonged exposures to much smaller amounts. This effect is best seen in lymphadenoma, lymphosarcoma, and mediastinal sarcoma, but the use of these massive doses is almost invariably followed by great systemic disturbance; the patients soon suffer from languor, exhaustion, and nausea, or even vomiting, and sometimes there is pyrexia. These symptoms are attributable to the occurrence of an auto-toxemia. The use of emanation tubes has been notably extended, and they have been found specially convenient for treating inoperable nodules when situated in positions where treatment by external applications is impossible. For the rest the report follows the lines of previous records in the matter of malignant disease, while its chief interest lies in the accounts of the treatment of non-malignant conditions. There is a widespread idea amongst the public that radium is only of use in the treatment of malignant growths, and many medical men seem to share this opinion, though the evidence to the contrary lies before them. Lupus yields rapidly and with good results; warts and granulomata can also be successfully treated, and many affections of the skin are materially improved by means of radium, though the treatment is usually reserved for cases which have not responded to ordinary therapeutic measures. It is true that in cancers and similar tumors radium is often our only resource, but there are many simple tumors and other morbid conditions which respond readily to radium, while little can be done for them by other therapeutic measures. There are two affections which show much benefit from the action of radium and which have been responsible for an enormous amount of misery, as well as for a direct and sinister influence on the birth-rate—these are uterine fibroids and chronic metritis. In these the main symptoms, menorrhagia and metrorrhagia, prove very amenable to treatment by radium, even though repeated operation and drugs have failed. Here there is clearly a large field for future work, and if the view taken by the report of the Institute is correct we ought soon to have more general recourse to the treatment and a substantial amount of experience on which to rely in recommending radium. The war has afforded a number of interesting examples of the value of the application of radium. The best results were obtained with scars; these were

softened, and in this way movements which before were impossible owing to the scars were rendered easy, and fibrous adhesions were loosened. Unfortunately the pains associated with scars did not yield to treatment.

The Radium Institute has thoroughly justified its existence; but those who have appreciated rightly the work it has already accomplished feel sure that very much more will be done in the future. Year by year, as experience increases, the field open to radium treatment increases also, and the methods of use become more clearly defined. The role of radium, we feel sure, will be far wider in the future than it is now, and we welcome the intention to prosecute scientific research in the many directions which are sure to invite the attention of the chemico-physical laboratory. One closing remark—much of the work done at the Institute is entirely gratuitous, some 65 per cent of the patients making absolutely no payment.—The London Lancet.

Roentgen Examination of the Appendix.—Spriggs and Marxer, in The Lancet, show that by the use of the proper methods of examination the appendix can be visualized and studied roentgenologically in the majority of cases, and that the information yielded by this examination is of great value. The patient should be prepared by a dose of castor oil thirty-six hours before the opaque meal. The best opaque meal is 425 mls (three-fourths pint) of buttermilk with 150 grams of barium, or less, depending upon the subject's build. The following points deserve special stress: 1. Manipulation and careful screening are necessary to find the appendix, to determine its tenderness, and to reveal its mobility and movements. 2. Several plates must be taken as they, alone, reveal the chief features which must be studied. 3. The patient should be either supine or in the semilateral position. 4. The positions of the parts are first determined by manipulation with the gloved hand, while the wooden spoon is used for the later manipulations because it is not opaque and plates can be taken when the appendix is brought into clear view. 5. The ileum and cecum can usually be moved about to give the best exposures of the appendix. 6. If the appendix be behind the cecum a semilateral view may reveal it. 7. The end of the ileum and appendix should be shown filled at the same time when possible. 8. Movements must be

very gentle, or must not be made, when there is pain, tenderness, or inflammation of the appendix. 9. A Coolidge tube should be used throughout, with a two millimetre aluminum screen. 10. Where the appendix fills in part only, or empties before it has completely filled and the case is doubtful, the usual dose of barium should be divided and given in a succession of meals. By a careful perfection of the technic the appendix can be revealed and studied in more than eighty per cent of all cases. The details of the findings in both normal and diseased appendices are given at length and the authors summarize their observations by saying that the normal organ fills and empties at about the same time as the cecum; that in young people it may fill and empty repeatedly, the cecum remaining full; and that the best views are to be secured from twelve to fourteen hours after the opaque meal. The determination of whether the appendix is, or has been diseased demands attention to its filling and emptying, its shape, and mobility, to the presence or absence of concretions, its position, and to the presence of hyperactivity, spasm, and tenderness. Continued contractions and spasms accompany active inflammation and, while the presence of a tender point is of value, it requires care in its interpretation. The direct X-Ray examination of the appendix is of great aid in the diagnosis of cases of chronic appendicitis. In a series of thirty-six cases in which the X-Ray and operative findings were compared the diagnosis was verified at operation in all.

Pityriasis Rosea—Le Damany (La Presse Medicale) says that the malady is a disease of the robust like psoriasis. It runs its course in from 1 to 2 months. Its incidence is unknown because of its benign character. The almost constantly present polyadenopathy is strongly suggestive of a tuberculous factor, however benign. Aside from this, it has been seen in association with lichen scrofulosus, scrofulous lymphnodes, pulmonary tuberculosis, suspicious apices, tuberculous family history. The tuberculin reaction has already been mentioned. Numerous illustrative cases are appended, from which we select one. An adjunct was seen with a well-marked case of pityriasis rosea, involving the entire surface. The general condition was excellent. In the axillae micro-polyadenopathy. The eruption vanished in about ten weeks. Examination for tuberculous lesions of the

classical types was negative. A retraction of the sheaths of the flexors of the palms, suggesting a beginning Dupuytren's disease, is worthy of mention because the claim is heard in some quarters that this lesion is para tuberculous. The cutireaction made 25 days after the first outbreak was frankly positive.

Nature and Symptoms of Cardiac Infection in Childhood.—Poynton (British Medical Journal) presents some of the features of rheumatic disease of the heart and points out that the first attack of rheumatism in childhood may be of any grade of severity from the most transient and vague to the rare, rapidly fatal type. In the early cases with cardiac involvement there are two important groups: The one with sore throat, arthritis, and morbus cordis; the other with chorea and morbus cordis. In the very mild cases, some degree of cardiac dilatation is to be found. In these very mild cases this is often the only evidence of cardiac involvement and must be looked for in every case of rheumatism in children, even in the absence of cardiac symptoms. It is best made out by careful percussion of the cardiac dullness with records kept by taking tracings from the points marked. The chief symptoms of this condition, aside from the slight enlargement of the heart, are shortness of breath, pallor, palpitation, and fainting attacks. The pulse

is rapid and compressible. The first sound is often shortened and a soft mitral systolic bruit may be heard. In the severer grades all of these symptoms are exaggerated. The opposite picture to this mildest one is that of the most severe type of rheumatic heart infection. In this type the general evidences of severe, acute infection are pronounced, the rheumatic symptoms marked, and the cardiac dilatation and weakness are great. Death ensues in a very brief time, with or without the development of pericarditis and evident valvular lesions. A second form of this fatal carditis is the insidious type, occurring in feeble children. Here the symptoms are not very definite, but progressive weakness and evidences of cardiac dilatation are striking. The author says that the consideration of pericarditis, and myocarditis apart from carditis is essentially artificial.

Tachycardia and Intermittent Heart.—

In tachycardia whether proceeding from exophthalmic goiter or from other causes, or in intermittent heart arising from the excessive use of tea, coffee, or alcohol, Cactina Pillets will be found of exceptional value. They afford a safe and reliable means of overcoming excitability and irregularity of the heart's action. One or two Pillets every two or three hours will exert the desired effect by improving the nutrition and tone of the cardiac muscle.

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No. 2

THE EYE AS AN AID IN DIAGNOSIS AND LOCALIZATION OF INTRACRANIAL LESIONS.

By Dr. Louis N. West, Raleigh, N. C.

In the routine examination of patients with intracranial lesions or disease, in order to make a more correct diagnosis, and if possible to localize the trouble, we wish to determine the following points:

1. The sensibility of the cornea.
2. The size, shape and reaction of the pupil.
3. The acuteness of vision and the field of vision.
4. The fundus of the eye and of blood vessels, optic disc as regard to atrophy.
5. The condition of the muscles of the eye, Nystagmus, Squint or Paralysis.
6. Any anomalies of the eye.

Cornea.

Disturbance of sensation in the cornea do not manifest themselves by any special objective or subjective phenomena. The normal cornea is not sensitive to pressure, and it is sensitive only to heat in the peripheral portions (not in the center). Its entire surface, however, is sensitive to pain. The sensibility of the cornea is tested most conveniently by touching the cornea with a piece of absorbent cotton, care being taken here to eliminate fear from actual pain. In normal conditions when the cornea is touched the eye will wink, and the patient will give evidence of some discomfort. In other cases the wink is absent, indicating a partial or complete anaesthesia. After section of the ophthalmic division of the fifth nerve, and after installation of cocaine, there is complete anaesthesia. Neuro paralytic Keratitis is a condition that is frequently the cause of anaesthesia of the cornea, and this is due to a lesion close to the gasserian ganglion. Anaesthesia is sometimes present in Tabes, but is always accompanied by cutaneous numbness of the region supplied by the Trigemini. If the anaesthesia is unilateral, without any diminished facial sensation, it may mean a tumor of the cere-

bellum on the same side. In such cases there will also be course nystagmus to the same side. Diminished sensation of one or both cornea may be a sign of hysteria when corroborating evidences are found. Diminished sensation of one cornea, therefore, means a lesion of the fifth nerve of that side, a lesion of the cerebellum of that side compressing the fibres of the fifth nerve, or hysteria.

Pupil.

Normal size $2\frac{3}{4}$ to $4\frac{3}{4}$ mm. Only in natural sleep is the pupil in repose, and it is then strongly contracted. Abnormal contraction of the pupil is the result either of excitation of the third nerve, spasm of the sphincter muscle, or of enervation or paralysis of the sympathetics. Paralysis of the dilators, or it may be the result of purely mechanical causes, the intracranial affections that stimulate or irritate the nerves of the sphincter without destroying the cells with which they communicate. Paralysis of the cervical sympathetics is always accompanied by myosis, but the pupils react to light and eserine, and will dilate with atropine. Associated symptoms are ptosis and anaesthesia of the fifth nerve. There is no general disease so frequently the cause of myosis as syphilis, notably the cerebrospinal form, that is as Tabes and General Paresis. It occurs in the first stage of Tabes and even to a high degree after complete tabetic optic atrophy, whereas in other forms of optic atrophy there is ordinarily mydriasis. Tabetic myosis resists the action of cocaine and atropine.

Mydriasis.

Relative dilation of the pupil, like myosis, may be due to functional causes or to excitation or irritation of the cervical sympathetics, by intracranial or cervical lesion, or through the influence of psychic and sensory phenomena and to paralysis of the sphincter. In functional mydriasis the light and convergence reactions are present. Paralytic mydriasis is really paralysis of the sphincter of the pupil, and is the effect of a drug or disease. Meningeal irritation may cause a spasm of the sphincter muscles with contraction of both pupils. Compression of the nucleus of the nerve for the sphincter muscles or of the fibres in the third nerve trunk will cause dilation of the pupil, but since the nucleus of the sphincter and that for ac-

accommodation lie close together, you will have paralysis of accommodation, and the patient will not be able to see near objects clearly. Usually the light reaction is also absent. Of clinical interest Ophthalmoplegia interni occurring in one eye and lasting a long time is almost always due to luetic nuclear lesion. Argyll-Robertson pupil is a condition in which light reflex is lost and convergence is present, and is found to be associated with anomalies of the knee—jerk, etc. The condition is to be explained by a break in the reflex arc for the light reaction. It is now generally agreed that the break in the arc must be in the fibres connecting the primary visual center with the sphincter nucleus. In support of this a tumor non-luetic in the region of the third ventricle by pressure may produce Argyll-Robertson pupil. It is, however, almost without exception a symptom of syphilis of the nervous system. In cortical blindness from circulatory or other lesion of the occipital lobe, the pupils retain their normal diameter and their reaction to light. It may be said that blindness resulting from lesions that are not cortical has for effect Mydriasis with absence of light reflex. In acute meningitis, septic sinus thrombosis, brain abscess, bilateral mydriasis is not rare. All trauma, neoplasms and inflammations capable of implicating the third nerve anywhere along its course from the nucleus to the globe may be a cause of mydriasis contrary to the former conception, which was to the effect that the lesion in question must produce complete paralysis of the third nerve. They may be limited to the pupillary or accommodative fibres.

Consensual Reaction, is when the pupils contract equally when one is illuminated. Now if the pupil of the side exposed to the light does not contract, but the other does and one changing the light to the other side, consensual reaction is lacking. This indicates a peripheral lesion in the nervous apparatus for innervation of the pupil on the side first examined. If now the pupil on the side exposed to the light does not contract, nor does its fellow, but changing light to the other side causes contraction of both pupils, this indicating a profound trouble either of the apparatus concerned in peripheral perception or transmission, the consensual reaction is lacking in both eyes only in lesions of the peripheral or the central nervous system, most probably syphilitic.

Field Of Vision.

The perimeter findings in choked disc

are as varied as the condition that cause it. In some instances, at least in the early stages no external evidences of the presence of choked disc may be found other than the ophthalmoscopic picture. The extent and stage of the papillitis will largely determine the perimeter findings. There is as a rule contraction of form and color field. It may be concentric or sector like or the color field may be reversed, and as a rule a rather rapid loss of the nasal field. However, all of this is usually a late phenomenon, and indicates nerve fiber degeneration. The reversal of the color field should also be remembered is a frequent symptom of Hysteria, and Hysteria in turn is often associated with patients suffering from brain tumor.

Central scotomata is chiefly due to affections of the papillomacular bundle. This group of neurons pass in the temporal sector of the optic nerve and is particularly susceptible to pressure. Central scotomata of one eye due to pressure is found with frontal lobe tumors of the same side and also with disease of the posterior ethmoid cells.

Fundus of Eye.

The ophthalmoscopic changes in the nerve head that interest us are atrophies and edema. The simple atrophy in the great majority of cases is a symptom early or late of Tabes.

The papilledema, as it occurs in brain tumor, is now generally regarded as a purely mechanical character coming on in both eyes at about the same time. The starting point of papilledema in brain tumor is the blocking of the passage between the third and fourth ventricle and the distension of the lateral ventricles. This liquid is forced in the sub-dural space and out in the sub-dural lymph space of the optic nerve. The early or late appearance of papilledema depends much upon the situation of the tumor. A tumor blocking the passage between the 3rd and 4th ventricle will cause early choked disc and decompression here will not give relief. Tumors distant from the third ventricle do not block the passage until late, and decompression is indicated. If the tumor cannot be located and the optic disc shows signs of edema with failing vision, a decompression should be done at once in order to save vision and with the hopes that later the tumor will give some localization signs and then be removed. If the vision has been reduced through atrophy of the nerve, further atrophy may be checked, but the lost vision will not return.

Optic atrophy and pallor both may affect only a sector of the disc. Usually the lower temporal portion, temporal pallor, is a symptom of Multiple Sclerosis, Alcohol and Tobacco Poisoning, though it does not necessarily give any indication of the gravity of the disease.

In order to better understand optic atrophy, it is necessary to remember that the optic nerve fibers are the axis-cylinders of the ganglion cells of the retina. When the ganglion cell is destroyed the axis cylinder degenerates throughout its entire length—this is ascending atrophy. If the fibers are cut across in its course to the brain, the fibers degenerate in both directions, ascending from the lesion to the brain and descending from the lesion to the retina. The other causes of atrophy beside toxic are mostly mechanical. There are forms of optic atrophy descending from lesions of the optic nerve behind the entrance of the central retinal artery as far back as the chiasm in which loss of function precedes the atrophy by a long time even after the atrophy is complete the retinal vessels may remain normal for several years.

The chief cause of secondary atrophy vary in frequency with the age of the subject; in childhood it is due chiefly to Neuro-Retinitis secondary to meningelial infections, pneumococcus infections and to suppration of the middle ear, and these causes are often bi-lateral. In adults syphilis stands first.

The diagnosis of beginning papillitis is clear, if in addition there are present signs of retinitis or chorioretinitis. Often the hyperemia extends to the entire papilla, the physiological cup is obliterated, and the borders of the disc disappear. Choked disc is most always bi-lateral, though seldom developed alike in both eyes. A certain localizing value has been ascribed to the condition when occurring first in one eye as indicating that the neoplasm is on the corresponding side. True, simple, inflammatory or infectious papillitis is often monolateral when caused by local lesions of the orbit. Septic cellulitis extension from the sinuses of the nose; if from a general infectious disease, it is frequently monolateral. Choked disc when present is one of the most valuable signs of tumor, but it must be borne in mind that it is absent in all cases at an early period. Most cases until a late period. Its evidence is supposed to be earlier with tumors involving the cerebellum than those of the cerebrum. The great majority of cases of choked disc are caused by

tumors of the brain, and of all symptoms which brain tumor presents, choked disc is most nearly pathognomonic. In brain tumor papillodema develops in about 80 per cent. of all cases. Less often with tuberculous growths, the nature of the tubercle is to replace not displace tissue. The location of a tumor is more influential in causing choked disc than its size; thus, it is almost constant in tumors of the Cerebellum and Corpora Quadrigemini, but less frequent in tumors of the Corpus Callosum and convexity. Choked disc from brain tumor usually is bilateral but the degree of swelling or stage of progress may vary widely in the two eyes, when unilateral, it may occur in either eye, but is more frequent on the side of the tumor. Tumors situated far forward in the brain are more apt to cause choked disc on the same side than when situated far back, but this is not always the case. In unilateral papillodema the possibility of a growth which involves one nerve must be borne in mind.

The degree of visual acuity that accompanies choked disc is most variable. The sight often remains good even into the advanced stages; or it may be profoundly affected almost with the first signs of change in the papilla. In these cases normal central vision may be associated with great narrowing of the peripheral field. Rapid and early loss of sight calls for urgent palliative measures (decompression).

Ocular Palsies.

The ocular palsies of central origin are largely the result of degenerative changes in the nerve cells and in the blood vessels of the brain and spinal cord, and for these syphilis is directly or indirectly responsible. This is also true as to most of the neoplasms that figure in the etiology of deviation of the globe.

The paralysis is peripheral when the lesion is situated anywhere along the course of the nerve between its nucleus and its termination in the muscle.

Peripheral paralysis is divided into extra-cranial and intra-cranial. In order to decide as to whether or not a given case is peripheral or central in origin, it is necessary that one bear in mind the anatomy of the nerve supply of the ocular muscles. The sup. oblique and ext. Rectus has its special motor nerve. All the rest, including the levator and the intrinsic muscles of the eye are supplied by the third, hence paralysis of the ocular muscles occur singly or in groups. Paralysis strictly limited to one of the muscles having

its own individual nerve warrants the supposition that the lesion is peripheral, and one looks carefully into the history as to some such cause as syphilis or fracture of the base of the brain infections of the middle ear, or extra cranial lesions or trauma. When all the muscles innervated by the third nerve are paralyzed it is equally probable that the lesion is peripheral. If the inferior oblique, the sphincter of the pupil and ciliary muscles are alone paralyzed, one may conclude that the lesion is orbital.

Paralysis of all the muscles of the eye, both external and internal (total ophthalmoplegia) may be set down as peripheral, i. e., orbital or basilar. Associated symptoms of the fifth nerve are frequently present. If there are no associated symptoms and one notes besides that there are other symptoms pointing to trouble of the oblongata, the lesion may be called nuclear. This is particularly true when the syndrome assumes the type known as (ophthalmoplegia externus). This is when the external ocular muscles are only involved, and the pupil and ciliary body still retain their function.

Nuclear paralysis of oculo motor are in consequence of the great extent of the nucleus seldom total. The sphincter pupella and ciliary muscle generally remain unaffected. A nuclear lesion of the abducens causes, as we know, not isolated paralysis of the ext. rectus of same side but conjugate paralysis affecting the rectus externus on the side of the lesion and the rectus internus of other eye, the result being conjugate deviation towards the same side. Further nuclear abducens paralysis is accompanied by facial paralysis of peripheral type, owing to the proximity as the nerve turns around the 6th nucleus.

In intra-nuclear paralysis of the 3d nerve the sphincter and ciliary muscle practically never escape, as the nerves are in close contiguity with those of ext. ocular. Intra-nuclear abducens lesion causes isolated paralysis of ext. rectus, not conjugate paralysis of that and rectus of other eye.

When we have progressive pathology (Gummatous, tumors, or meningitis) in the neighborhood of the 3rd Emergence, ptosis is usually the first symptom. Fractures of the base involve most frequently the abducens, which occupies a very exposed portion at the summit of pyramid of the petrous bone. Of the irritation symptom affecting the ocular motor, Nystagmus first deserves mention. Lesions near abducens nucleus may cause

Nystagmus and in rare cases conjugate deviation, the deviation being to the side of the irritation.

In lesions of the cerebral peduncles we have in addition to the pyramidal lesion, which causes a complete hemiplegia of the opposite side, involvement of the roots of the third, which leads to oculo-motor paralysis on the same side as the lesion (Weber's paralysis).

Lesions of the Cortex of Cuneus.

A unilateral lesion has homonymous lateral hemianopsia with retard pupillary reaction. If lesion is bilateral as in tumors of falx cerebri or toxic disturbances as in uremia, we have cortical blindness with the pupillary reaction unaffected. Gunshot injuries of the occipital lobe producing hemianopsia has been very frequent in the past war. Gordon Homes in Brain 1916 points out this very interesting fact that each macula lectea has a representation in one occipital lobe only, not in both.

Lesions of the White Mater of Occipital Lobe of Angular Gyrus.

Bi-lateral lesions involving the visual memory center in the cortex or the association fibers which pass from the centres cause object blindness or Sensory Aphasia.

Sensory Aphasia.

A lesion affecting the visual word center, a lesion affecting either of these centers, or a lesion affecting the fibers which connect these centers either with themselves or with the two motor centers, will produce Aphasia. The character of the Aphasia will depend wholly upon whether the individual center is affected, whether the individual center plus the fiber leading to another center is affected, or whether one or more center is affected. The visual word center is situated in the angular gyrus. The type of lesion that usually causes Aphasia is circulatory and therefore apoplectic. Rarely is it due to the presence of a new growth.

Ptosis.

Congenital Ptosis is, as a rule, bi-lateral and partial, and is usually accompanied by other ocular anomalies such as squint, nystagmus, coloboma of the nerve tract, opacities of lense, etc. Not infrequently there is undevelopment of the entire organism.

The anatomical causes are usually (1) Absence of the nerve center, or of the conducting neurones. Injury at birth may cause a traumatic ptosis by direct injury to nerve. (2) Arrested development of the levator.

Acquired Ptosis is more important. Ptosis, through which the function of the motor nerve of the levator suspended or its substance destroyed, are either peripheral or central. Among the peripheral causes are tumors, hemorrhage, inflammation and abscess in the orbit or from accessory senses.

The lesion involving the nucleus of the 3rd nerve or immediately surrounding it constitutes the central cause of paralytic ptosis. Of the primary causes of this form of ptosis whether peripheral or central, syphilis stands at the head. Syphilitic Ptosis may appear 3 weeks or 30 years after the initial lesion, and is nearly always accompanied by paralysis of other branches of the 3rd nerve, and is at times seen in connection with other phases of the disease, such as tabes, etc.

Isolated Paralysis of the levator branch of the 3rd nerve is strongly suggestive of a central lesion. Other affection of which ptoses may some time become a symptom are syringomyelia, Basedow's Disease, Cerebral tumor, Multiple Neuritis and Simple Senility and in some poison, etc.

Nystagmus.

When Nystagmus dates back to infancy it has no great diagnostic significance, but a well marked Nystagmus coming on later in life is always significant. It may come with the most diverse intra-cranial condition, but certain types have definite significance. The occurrence of Nystagmus in disease of the spinal cord is without doubt an indication of the involvement of the cerebro spinal nervous system or of the cerebellum or of parts adjoining it.

The diseases of the nervous system in which Nystagmus occurs are Multiple Sclerosis, Friedreich's Ataxia, Alcoholism, Syringo-Myelia, Brain Tumor, Cerebral Hemorrhage and Softening.

There may be a Nystagmus when a muscle of the eye is about to be paralyzed or when it is recovering from a paralysis, and here the twitch is in the direction of the muscle affected. Marked Nystagmus in looking to one side may mean a pons lesion, Nystagmus coarse and slow to one side and fine and rapid to the other may mean a cerebellar lesion on the side of the course movement.

Pulsating exophthalmus is generally due to a fracture of the middle fossa of the cranium, which tears the internal carotids which permits communication between the carotids and the cavernous sinus. Among the other forms of exophthalmos of moderate slow development or

of rapid, are generally local, and are usually in the socket.

A Lesion Involving the Optic Nerve.

Total destruction of the optic fibres peripheral to the chiasm produces of course complete blindness of the eye and the pupillary reflects are not evoked by this eye, but may by the other eye, if only a portion of its fibres are destroyed we have instead scotomata and narrowing of the field of vision, etc.

Lesion of the Chiasm.

If the lesion involves only the mesial portion of the chiasm as in cases of tumors of the hypophysis, hydrocephalus of the third ventricle and empyema of the sphenoid antrum. The result is blotting out of both temporal halves of the field of vision. If on the other hand the external portion of the optic nerve decussation are destroyed, the mesial remain ineffective, a condition which is possible by aneurysm of both carotids or gummatous foci at the base of the skull we have suppression of function in the outer portions and hence nasal blindness.

The result of destruction of one-half the chiasm is blindness on the side of the lesion and temporal hemianopsia in the other side.

Lesions of the Optic Tract.

All of these lesions cause homonymous lateral hemianopsia for the halves of the fields contra-lateral to the lesion. If the lesion is peripheral to the point at which the reflex fibres to the pupillary nucleus are given off a ray of light thrown on the blinded half of the retina causes no contraction. If the lesion is central to the point at which the above reflex fibres are thrown off, illumination of the insensitive half of the retina does on the contrary cause contraction of the pupil.

Keens' Surgery.

Nervous Diseases, Hunt.

Piersol's Anatomy.

Villiger Brain and Spinal Cord.

Regional Diagnosis, Bing.

Principles and Practice of Perimetry, Peter.

Fouchs' Ophthalmology.

Diagnosis of Fundus Oculi, Oatman.

Archives of Ophthalmology, 1918.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—*Annales des Maladies Veneriennes*.

THE TUBERCULOSIS CLINIC.

Dr. C. C. Hudson, Health Officer of Charlotte,
N. C.

We have several organized agencies for fighting tuberculosis, the chief of which are the open air school, the sanatorium and the tuberculosis clinic with a follow-up system for the home. It is now recognized that many cases of tuberculosis in adults are the result of infections, started in childhood. Few deaths are recorded from tuberculosis between the ages of four and fifteen years, but anyone who studies children from homes in which there have been cases of tuberculosis cannot but be impressed with the fact that many of the children will be fit subjects for active cases a little later in life, if not given proper attention and taught how to live. The sanatorium does much good, so far as it goes, but it will be a long time before we will be able to care for all our cases of tuberculosis in sanatoria. Even though we were able to send all cases to institutions, we could hardly expect to keep them indefinitely and it would still be necessary to come back to the home and the clinic as the institution of last resort, and this must remain our greatest agency in the fight against the 'Great White Plague.' The following are the principal reasons for the existence of the tuberculosis clinic:

Only a part of our people are able to pay for medical attention. Many people on account of poverty can only have a physician as a last resort. They try every cough medicine and all remedies advised by older people of the neighborhood and then call the physician. Tuberculosis is a slow, wasting disease and the average family is reduced to poverty so that the public must make provision for the care of the patients or they will receive little medical attention. This attention can be more easily given in groups than by individual home or office visits and the tuberculosis clinic offers the best means of securing this attention.

Many physicians prefer to send patients to a clinic to having them in their offices. It does not always make the other patients in the office feel comfortable to have a thin, anaemic individual sitting opposite and constantly coughing.

Better facilities can usually be pro-

vided for diagnosis in the clinic than in the office. The use of an X-ray machine can usually be secured. A nurse is available to prepare the patients for examination. The laboratory is available for sputum examination or the sputum may be sent to the State Laboratory by the nurse.

The physician who has charge of the clinic should become expert in the diagnosis of tuberculosis so that many cases in the early stages of the disease will be discovered. This is the time when most good can be done.

As the work will be free, many people will apply for examination who would not do so were they compelled to pay. Many cases will thus be discovered and cured who would not be discovered until bed ridden.

Patients thus can be more easily taught the essential precautions and the treatment in groups than individually. If one patient erects a sleeping porch, others will learn the cost and how it was constructed. One patient seeing another keep up the precautions will do likewise.

The children from homes in which there have been cases of tuberculosis can be brought to the clinic, examined, and when necessary, given instruction in reference to food, sleeping in the open air, and the necessity of going to the open air school. As they will see patients with advanced cases of tuberculosis, it will be much easier to get them to obey instructions.

The tuberculosis clinic is the center for general educational work. Short newspaper notices can be given describing the work in the clinic, the symptoms of tuberculosis and the importance of early diagnosis. One week each year can be devoted to a general examination of all people in the city who have coughs. All suspicious cases can be watched through the clinic and much valuable work can be done.

The essentials for the conduct of a successful clinic are the following:

1. A capable, interested physician who should be paid for his work and who should have the confidence of the physicians of the community and be able to secure their cooperation.

2. A suitable office of at least four rooms; one white, and one colored waiting room, a dressing room and an examination room. The office should be light, warm and free from noise.

3. A capable follow-up nurse.

4. Adequate supplies, such as sputum

*Read before the recent meeting of the North Carolina Medical Society at Pinehurst, N. C.

outfits, instructive pamphlets, files, examination cards, etc. It is also necessary to supply some medicines but these may be secured upon prescription.

5. The outfits for collecting sputum must be kept on hand and an X-ray is of great assistance.

A tuberculosis clinic was started in Charlotte in the early part of 1918. Some trouble has been experienced on account of changes in the staff and the lack of a suitable office but much has been done. Five hundred and five patients were registered at the clinic during 1918. Most of the patients were discharged as not having tuberculosis. Two patients were sent to Sanatorium. Twenty-nine patients died during the year. Other patients were discharged for various causes and two hundred and sixteen patients were under observation at the end of the year. Not all of these were active cases of tuberculosis. Many of those under observation were children from tubercular homes. The nurse made 2270 calls in connection with the tuberculosis work during 1918.

Tuberculosis is a preventable disease. It is curable. Fresh air, proper food and rest being the essentials.

North Carolina has a fine climate. There is no reason for people in this State not living in the open air most of the year and sleeping in the open air all the year. With proper instruction and care tuberculosis in North Carolina should be eradicated and we believe the tuberculosis clinic should be the base for the general work.

Dysmenorrhea—Menstrual pain, when nervous in origin, or due to reflex spasmodic conditions, can often be promptly relieved by full doses of Peacock's Bromides when other measures prove of little or no avail. After one or two doses, the patient will fall to sleep and awaken in a few hours with the spasmodic condition completely relieved, the natural flow established, and the pain entirely gone.

The Du Pont Chemical Works, Equitable Building, New York City, has just issued a new pamphlet that will be of interest to manufacturers of builders' trunk and fancy hardware, lighting fixtures, silver and gold novelties, also articles made from wood, celluloid and glass that require a water and air-proof coating.

It describes a line of lacquers in three grades, suitable for practically all purposes for which lacquers are used.

FIRST ANNUAL SESSION NORTH CAROLINA HOSPITAL ASSOCIATION.

By Dr. J. F. Highsmith, President, Fayetteville, N. C., Presiding.

On this occasion I have no set speech to make. This is rather a get-together meeting, a heart to heart talk, with no knife up our sleeves no axe to grind, but to gather all and the best that we can for the mutual good of the sick patient that happens to come under our care in our hospitals in North Carolina.

There is no other business with as much capital invested as in the Hospitals in North Carolina, that needs more careful handling. They came up almost in a night.

The way this movement came about: When Dr. Charles Laughinghouse was president of the North Carolina Medical Association, and we met in Asheville in 1917, at that meeting Dr. Laughinghouse (now Lieutenant Colonel Laughinghouse) asked Dr. J. T. Burrus (now Lieutenant Colonel Burrus) to prepare a paper bringing out something of the importance of Hospitals in North Carolina at the present time. Dr. Burrus got busy, traveled about over the State to the various hospitals, represented these different hospitals on moving picture screen, and we were astonished to see how many hospitals we had in North Carolina and their equipment.

Then going along with this, the president of the State Society asked that I prepare a paper on something about the surgical work that had been done in North Carolina in a certain period. I wrote to about sixty-five or seventy hospitals. From that list of sixty-five or seventy hospitals, I heard from twelve. They gave very good reports of the work that they had done. I know we would have heard from others but they did not have any means of making reports, did not have any write-up systems and all the different things which should be connected with each respective patient, to go on the files that histories, etc., may be secured with ease.

Realizing the "Wheels of the Gods grind slowly", and that everything has to have a beginning we fully realize that we are just beginning in North Carolina in the hospital movement. A little while ago North Carolina was looked upon as a

*Read before the recent meeting of the N. C. Hospital Association at Pinehurst, N. C.

strip of land between Virginia and South Carolina, with no surgeons in it, no hospitals. Therefore, as necessity is the mother of invention, we saw that to find out anything about the amount of work being done we would have to have some kind of organization, mutual between us.

At this same meeting Dr. Laughinghouse, president of the Society, appointed a committee consisting of Dr. J. T. Burrus, of High Point, Dr. H. F. Long of Statesville and Miss L. E. Henderson, President of the State Nurses Association and myself to take into consideration what we would do—whether we would organize a State Society called North Carolina State Hospital Association, or stand pat where we were.

We met in Greensboro and recommended to the State Society that we thought it best to form an organization which action was in turn referred back to the House of Delegates.

At the last meeting of the North Carolina State Medical Society another committee was appointed by the President consisting of Dr. J. M. Parrot, Dr. H. F. Long, Dr. C. V. Reynolds, Miss L. E. Henderson, and myself. This committee met in Greensboro on September the 2nd last year, notifying at the same time hospital representatives to meet with us on the morning of September 3rd. Conditions were discussed fully and the North Carolina Hospital Association was organized with a membership of 22. This was the beginning. So it stands to-day.

Whatever we can do and when the physician or surgeon, dietitian, nurse, floor mopper, engineer, fireman, dish washer and everything and everybody connected with the hospital feels they are dealing with a sacred trust to the sick and unfortunate under their care, and their hearts and souls go out in the good they can do, then I feel that we are making progress.

Dr. John G. Bowman, the business head of the American College of Surgeons, is right when he says it takes, brains, hard work, patience, education and Christian fortitude combined to make hospitals of the present what they should be.

We cannot expect North Carolina to have a hospital Association like the State of Illinois, New York, or Massachusetts, but if we are organized, in a way doing our best we are gaining ground and putting ourselves on record, planning for the future, clearing the soil, digging stumps, preparing our land, so that future gen-

erations may be benefited and commend us for what we have done.

This is not a move to send one hospital ahead of another nor give preference to any one, but for all to stand to the wheel and help so that we may have an organization worth while, helpful to every institution as well as to the respective individuals connected with it. For instance if a nurse comes to a hospital to take training, say that she makes good, she would have the privilege of going to another hospital if she sees fit and be credited with her time, just as a boy goes to the University of North Carolina conducts himself properly, makes his classes and then should decide for any cause to go to the University of Virginia the next year. We should be unified and standardized. I admit this is easier said than done, but for it to be done there must be a beginning. Now, on the other hand, if the nurse did not conduct herself properly, did not make her examination, did not do her work as she should, had to work a little too hard and in the sight of God and man did not do her full duty, then that nurse should not be allowed the privilege to go to another hospital and get credit for time and move up a step in her own estimation. A nurse who would do a thing of this kind knows she is doing wrong as well as we do. Especially at this time the nursing profession, with the Nurses State Association as their organ, have great possibilities far beyond their most vivid imagination. This is true not only in North Carolina but in all States in the union.

The Nurses Association in North Carolina is young along with the hospitals. They have done well but they have important work yet which confronts them in the way of standardizing their nurses. For the nursing profession to be standardized the hospitals must be standardized—they are inseparable.

Pardon me for the reference but I remember a few years ago the first nurse, a graduate, was brought to Cumberland County to nurse a case of typhoid fever. Had it not been for her, this young man would have evidently perished from the disease. The nurse was a graduate of one of our Northern hospitals. At this time we felt much humiliated to take this good lady in her white uniform,—a trained nurse—and compare her with the old colored woman, all honor to the old darkey and what she did to the best of her ability.

From this time on around 25 years ago

the nursing profession in North Carolina has come along in leaps and bounds, until now they are all busy, most of them making good and doing well. The nursing profession must always be a co-worker to the surgeon and physician. They must drift as far away from labor unions and that kind of business as it is possible, for the simple reason that their profession is so closely allied with the medical profession and they must forever place themselves on the high standard with the earnest desire deep down in their souls, as the true physician and surgeon has in his daily toil in the sight of God and man, to do his full duty for humanity.

I remember of hearing of the story of a nurse when gripe was at a high stage last winter and so many died from that dreadful disease, this nurse was offered several hundred dollars per week to take care of a rich man's family, she was employed doing her full duty at her regular charges but she refused to sell her services for money,—all honor to her.

Like Jenner, the discoverer of vaccine against small pox, making it possible to arrest this dreadful disease almost erasing it from the map. We are told that Jenner had discovered this virus and his discovery was admitted to be a success, all honor to him then, but his greatness caused him to refrain from notoriety and he preferred not to be placed on the mountain top as a target of notoriety and remarked "No, let me stay in the valley where I have been."

I think you will all agree that there has been no movement of any greater importance promulgated in recent years than effort to organize the hospitals in North Carolina. If it means better work, more efficient service for sick and suffering humanity, this done, indeed the movement does not stand second, even to the church, but is a co-worker with it.

Now we have, or should have, very important business to talk over this morning relative to this organization. As the retiring president I call upon each one here to express himself freely, what he thinks of the movement and the best way to go about making a go of this work.

THE DIAGNOSIS AND TREATMENT OF CERTAIN TYPES OF CEPHALIC PAIN.*

By Charles Metcalfe Byrnes, M. D., Associate in Clinical Neurology, The Johns Hopkins University.

Nearly twenty years ago, through the wise counsel of one of your distinguished countrymen, a man of rare attainments, an inspiring teacher, and a stimulating personality, Dr. C. Alphonso Smith, I was directed to the University of North Carolina as a suitable place to acquire the essential elements of a useful life. He chose wisely; for I feel that I owe to him, to the University, and to my fellow students much of the good that has come to me. No apology need be made, then, for this bit of personal history, nor will you question my sincerity when I say that it gives me real happiness to be with you today.

I have chosen to talk to you about painful affections of the head because they contribute, largely to the ills which you are called upon to treat; they are frequently misunderstood; and they are often symptomatic of a more remote and sometimes obscure disorder. If you will take the time to review your Practice of Medicine you will find that there are at least sixty-six separate and distinct diseases in which headache is mentioned as an initial symptom, or else forms a prominent feature of the affection. It is important, therefore, in the various types of cephalic pain, that searching studies be made to determine their cause and significance. Such studies should not be confined to clinical facts alone, for much is to be derived from a knowledge of the anatomy of the trigeminal and upper cervical nerves. I shall, however, confine myself to a clinical discussion of the more common types of head pain under the three main divisions of headache, neuritis, and neuralgia.

Very few of us have not, at one time or another, experienced that particular kind of head pain commonly known as headache; and yet, both the laity and profession sometimes use the word indiscriminately to include the ill-defined head sensations described by the neurotic as a sense of fullness, pressure, constriction, or emptiness, rather than real pain. It has accordingly been suggested that a dis-

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inction be made between true and false headache, but such a distinction seems unnecessary if actual pain be regarded as the essential feature of every headache. Difficulty is sometimes experienced in determining, from a hurried inquiry, whether one is suffering real pain or not; and it is therefore wise to give the patient ample time in which to relate his symptoms. Patience, then, in securing the history not only facilitates the differential diagnosis, but may furnish valuable information as to the presence or absence of an associated neurosis.

The character of the headache, its duration, location, and intensity are sometimes of diagnostic value. The pain may be moderate or severe, continuous, intermittent, or periodic, circumscribed or diffuse, and nocturnal or diurnal.

Enumeration of the various etiologic factors and the several disorders with which headache is associated is unnecessary; but it is well, nevertheless, to train one's self to think in an orderly manner of the more important conditions in which headache may be a prominent symptom. My custom has been to think first, of local disease in, or about the head, face, and neck. A search is then made for sources of infection in other parts of the body, and evidences of endogenous or exogenous intoxication. The cardio-vascular, renal, gastro-intestinal, metabolic and blood conditions must also be investigated. Thoracic, abdominal, and pelvic examination may sometimes reveal the origin of a so-called reflex visceral head-pain or topalgia. Inquiry should also be made as to the use of drugs, alcohol, and tobacco. Now that lumbar puncture has become generally used as an aid to diagnosis, it is well to remember that the puncture is occasionally followed by occipital headache of several days duration. Only, after a complete history and examination, then is one warranted in concluding that the affection may be purely of psychogenic origin.

There are, however, two types of cephalic pain which are generally recognized as definite clinical entities. Migraine and nodular or rheumatic headache are, thus, two instances in which "headache" may properly be referred to as a disease, although the pain is, of course, symptomatic.

Migraine, in its classical form offers little diagnostic difficulty. A family history of the affection, the periodicity of the attack, its onset usually during adolescence, its unilateral location in the begin-

ning, and the accompanying visual, gastric, and vasomotor disturbance, constitute a more or less characteristic clinical picture. Occasionally, there may be localizing sensory or motor disorders, marked by transient parasthesia, paralysis, or speech disturbances. It is not uncommon, however, to find that typical migraine is incorrectly diagnosticated as "neuralgic headache"; although the diffuseness, and continuous throbbing character of the pain should, alone, serve to differentiate the affection from a true neuralgia. A diagnosis is not, however, always so readily made; for there is an atypical or migranoid type of sick headache in which many of the classical symptoms are wanting, and it is this type in which diagnostic and therapeutic errors are most commonly made. They do not in any way resemble neuralgia, and yet, I know of several instances in which these irregular cases have been subjected to the various surgical measures resorted to in the treatment of genuine trigeminal pain.

Treatment of the disease is often difficult, and when once the attack is fully developed, there is little that can be done. Proper management of the patient during the interval between attacks offers some assurance of reducing the number, intensity, and duration of the paroxysms. Whatever the type of the affection it is rare not to find an associated neurosis, and whether the neurosis be regarded as a cause or an effect, a therapy which does not include it, is rarely beneficial. Various diatetic measures, gastric lavage, active purgation, internal hydrotherapy, and extensive medication have been recommended with variable degrees of disappointment. The attack may sometimes be aborted, if rest, isolation, and suitable drugs are prescribed at the very beginning. Phenacetin, caffeine, aspirin, cannabis indica, and the bromides are thought to be particularly effective, and a full "rest cure" with appropriate psychotherapy and internal medication may well be worth a trial.

The so-called nodular, rheumatic, or induration headache, first studied by Swedish clinicians is said to be a rare affection. It is only within recent years, however, that the subject has occupied the attention of English writers; and Playfair's translation of Aurebach's monograph, "Headache", gives an excellent description of the disorder. The affection seems to have been little recognized in this country and except for the writings of Yawger, is seldom mentioned in Ameri-

can literature; but it is difficult to recognize an unfamiliar condition.

The diagnosis is, in typical cases, easy. The disorder is said to be more common in women than in men, and is characterized by a dull, aching, continuous pain usually in the nape of the neck, occiput, or temples. The suffering varies in intensity, and is, at times, excruciating. It is said to be affected by barometric conditions and to show nocturnal exacerbations.

Exposure has been mentioned as an etiological factor, but the immediate cause is attributed to the formation of fibrous nodules within the substance of the muscles of the neck and the cranial aponeurosis. The nodules vary in size from two to ten millimeters and are commonly present at the border of the sternomastoid and within the posterior muscles of the neck. The nodules are easily palpable, extremely sensitive, and may, at times, be visible in the radiograph. Firm pressure over a nodule almost invariably reproduces the characteristic cephalic pain. Nausea and vomiting are, as a rule, absent, and heredity is of little importance; nevertheless, the condition has not infrequently been mistaken for migraine in spite of the continuous nature of the pain, the absence of periodicity, and the infrequency of the affection before the fourth or fifth decade. For a more detailed description of the disease the writings of Auerbach, Yawger, and Edinger may be consulted.

The prognosis for recovery is generally good; for, upon the adoption of suitable treatment, the vast majority of cases are completely relieved. I recall the case of a railroad engineer who had suffered from this type of headache for six years, and who had resorted to the use of many coal-tar preparations, and various other harmful, as well as, useless drugs without relief. The history of exposure, the character of the pain, its chronicity, the unmistakable presence of the painful nodules, and their characteristic distribution served to establish the diagnosis.

The most effective treatment consists of massage, baking, and the use of salicylates. Massage is, at first, extremely painful, and the earlier treatment may even aggravate the symptoms. This should not discourage the patient or the physician; for if persisted in, the nodules finally disappear, and complete relief may be reasonably promised. The treatments should, in the beginning, be cautiously administered and of not more than five or

ten minutes' duration. Later, they are gradually increased to one-half hour or more, and at the same time more vigorously practiced.

Syphilis as a cause of headache is of common occurrence, and while the type of pain possesses few characteristics which enable one to arrive at a diagnosis from that symptom alone, the available laboratory tests for the detection of syphilis make an error in diagnosis one of negligence rather than ignorance. The diffuse nature of the pain, its localization in the frontal, temporal, or occipital region, and the nocturnal exacerbations make an examination of the Wassermann test desirable should it not be included in every routine clinical and laboratory study.

Mott is of the opinion that the central nervous system may be involved during any stage of syphilitic infection; and recent studies by Fildes, Parnell, and Maitland have added to the increasing evidence that it is not infrequently involved early in the infection although there may be no symptoms of a nervous disorder. Headache, however, is not necessarily an indication that the central nervous system is directly implicated; but, since a fixation test in the blood alone furnishes little information as to the condition of the spinal fluid it is imperative in all cases of suspected luetic headache, as well as in all cases of suspected syphilis that both the blood and spinal fluid be examined. The spinal fluid study should not be confined to the Wassermann test, for a negative reaction is sometimes obtained in both the blood and spinal fluid when there is every reason to suspect the presence of syphilis. The cell count, globulin content, and gold chloride test should also form a part of every spinal fluid examination.

The laboratory is not, however, infallible, and it is well to entertain a patient indulgence for those who taught the older methods of accurate clinical observation. A fourth instance in which the two methods of examination have furnished contradictory evidence has been recently added to my records. The patient, a female, single, 37 years of age, was referred to me because of headache and "peculiar pupillary reactions". Examination revealed the typical Argyll-Robertson pupil, lost knee-jerk upon the right, greatly diminished knee-jerk upon the left, and complete absence of both Achilles jerks. There was no marked ataxia, but slight unsteadiness when standing with the feet together and eyes closed. A history of

syphilitic infection was not obtained, and there was no evidence of a primary lesion. The laboratory examination was as follows: serum Wassermann, 0. Spinal fluid: pressure 110, cells 7, globulin ! !, Wassermann, 0. In spite of the laboratory report and the fact that the patient is said to be a respectable single woman, a clinical diagnosis of early syphilitic *tabes dorsalis* appeared to be unquestionable. My belief in the correctness of this view was so fixed that it was finally decided to make my suspicions known to the patient. She finally admitted numerous "exposures", and the probability of an early infection although unaware of a primary lesion. Antiluetic treatment improved her general condition and relieved the headache entirely. It may not be unwise, then, in the syphilitic type of headache, although unsupported by the laboratory study, to make a therapeutic test when the history and clinical symptoms are sufficiently convincing.

The headache associated with increase of intracranial pressure from cerebral tumor, abscess, or meningitis, although not distinctive, may, at times, exhibit more or less characteristic features. The pain usually begins as a dull ache in the frontal or occipital region and is often regarded as a minor ill. Remissions or intermission may occur, but finally, the suffering becomes more persistent and often times excruciating. Vomiting may or may not be a prominent feature. Unfortunately the localizing symptoms have little or no diagnostic value as to the probable situation of the tumor. At times there may be postural features, so that with certain movements of the head or body the pain is intensified.

Aside from evidence of intense suffering and the character of the pain, the patient with brain tumor presents certain general features which, in a measure, suggest the serious nature of the affection. He looks ill; the countenance is drawn and anxious; and if the symptoms are of long duration, the complexion has a pasty, sallow appearance not unlike that seen in nephritis and cachectic states. The gait, if undisturbed by localizing symptoms, portrays the evident asthenia. Failure to secure even the slightest relief from the use of drugs is also a striking characteristic. Thus, when I am asked to see a patient whose features portray the above characteristics and whose headache has been uninfluenced by the administration of the more reliable analgesics, my suspicion of grave intracranial trouble

is at once aroused. An examination of the eye grounds will, in many instances, reveal the nature of the affection. It is to be remembered, however, that a normal fundus does not exclude the presence of a brain tumor, since papilledema occasionally does not develop until late in the disease; and that no headache is so insignificant as to justify the failure to make an ophthalmoscopic examination. I have been repeatedly impressed by the diagnostic errors of the practitioner who fails to make use of so simple an instrument as the electric ophthalmoscope, for with a little practice and a routine examination of the fundus oculi in every patient, he may soon acquire the skill and experience necessary for a recognition of even the earlier evidences of oedema of the optic nerve.

Probably one of the most common, and certainly one of the most frequently misunderstood types of cephalic pain is that associated with the functional neuroses. These psychalgias of the hysteric and head sensations of the neurasthenic are often perplexing problems to both the physician and the patient, and require painstaking inquiry into the history, social, economic, and domestic, conditions of each individual. The underlying neurosis is often obscured by the predominating psychalgia and I have known of instances of this kind in which a diagnosis of brain tumor, *tic douloureux*, meningitis and cerebral syphilis has been made.

The character of pain in the neurotic may simulate that occurring in any known form of organic disease. It may be diffuse or localized, continuous, intermittent or remittent, and may even be periodic, or confined to a particular nerve trunk, and thus resemble a true neuritis or neuralgia.

The ear marks of the neurosis are; however, generally present, and in spite of the variety of forms which these cephalalgias may assume, they possess certain features which lead one to suspect the nature of the underlying condition. The patient's description of the pain is often suggestive. The minutest details are related, lest the physician underestimate the intensity of the suffering or regard it as an imaginary ill. The condition is thought to be a very serious affair and there is much apprehensiveness about the prognosis. In spite of this belief some patients will not only smile, but actually laugh while attempting to describe what is said to be an excruciating pain. One young woman who was sent to me with

a diagnosis of *tic douloureux*, after consuming twenty minutes telling me of her terrific pain, finished by laughing and accusing me of regarding her ills as imaginary when I had said nothing to her other than to ask her complaint and request a full description of her discomfort.

Many of these patients not only seek the physician's advice, but come to him with a firmly fixed idea that the origin of the pain will be found in the ear, nose, throat, or teeth, although repeated examinations have shown these structures to be entirely normal; and it is hoped that, by some special method of examination he may discover and eradicate a condition which many other physicians have been unable to detect.

The frequency with which these functional pains may temporarily disappear through suggestion, the psychic demands of thorough history-taking, and novel methods of examination is sometimes a striking characteristic. I recall the case of a young married woman whose chief complaint was aggravating pain in the left maxillary region, and occasionally upon the right side also. The pain was of a dull continuous character with paroxysms of great intensity. It was several days before I had an opportunity to observe her at the height of her suffering, although instructions had been left to call me upon such occasions. She was later observed in apparent agony, tossing about the bed in a vain effort to endure her persecution, and crying bitterly of intolerable pain in the left cheek. It was suggested that an immediate sensory examination of the cheek be made to determine the presence or absence of anesthesia. To this she at once objected because of her inability to secure the necessary composure. I then told her such an examination was absolutely essential, since insensitiveness of the cheek might, under such conditions, be indicative of a serious brain disorder; and while I was perfectly confident sensation would be found to be entirely normal, this could not be determined without examination. She immediately began to acquire the necessary self-restraint, lay perfectly still, and replied to my questions concerning the sensory test with calmness and evident interest in the procedure. The pain entirely disappeared and the recurrent attacks invariably yielded to similar measures.

The migratory nature, diffuseness, and substitution features of psychogenic pains are also significant. Although trigeminal pain was the most dominant symp-

tom in the case just referred to, she invariably suffered pelvic, abdominal, and occipital pain during the menstrual period only. The gynecological consultant found nothing abnormal in the pelvis or generative organs, and regarded these symptoms as purely functional. During the intermenstrual period the face pain was of daily occurrence and to all appearance terrifying; but invariably, with the establishment of the menstrual function and its associated symptoms the trigeminal pain entirely disappeared. It is also interesting that the face pain was not infrequently associated with certain dreams, and particularly those of a sexual nature.

A striking illustration of the psychogenic origin of a certain type of headache is illustrated in the following case: A single woman, twenty-eight years of age was referred to me because of pain in the distribution of the left maxillary nerve which was said to be *tic douloureux*. The psychogenic nature of the affection was evident and definitely related to matters of sex, although it was at all times difficult to secure her co-operation in the discussion of sex matters. After three months of psychotherapeutic regime a degree of improvement was reached and she was advised to continue treatment in a Nursing Home. Three days before her departure from the hospital she suddenly developed, without any discoverable cause, the entirely new symptom of persistent occipital headache. The pain in the face had entirely disappeared. All efforts to determine the origin of the headache were unsuccessful. She persistently maintained that she had not received any distressing news, that she had not been thinking of anything out of the ordinary, and that she had had no cause to worry. A carefully repeated physical examination revealed nothing abnormal, and my conviction that the headache was psychogenic remained unshaken. Finally, just as I was leaving the hospital and had given certain directions concerning her visit in the country home, she said:

"Before you go, I have something to tell you."

I was then confident that her modesty had been overcome and that probably the cause of her headache would be revealed. She placed her handkerchief over her face, began to cry, and said something had been worrying her for three days. I refused to listen to her until the handkerchief was removed, and then learned that the "something" was the statement by a friend that all insanity is caused by too

persistent sex thoughts and ideas. Before I could deny the correctness of this opinion she at once announced:

"My headache is gone."

Neuritis of the head and face is rarely observed, except as a secondary condition consequent upon local inflammatory or pressure symptoms in which individual nerves may be implicated. Cervico-occipital neuritis is perhaps more frequently met with than similar affections of the trigeminal nerve. In fact, trigeminal neuritis with pain and objective sensory disturbance is extremely rare as an idiopathic affection. Through the kindness of Dr. William G. Spiller I had the opportunity to observe a patient in whom neuritis of the trigeminal nerve was thought to have followed an attack of influenza. Isolated syphilitic neuritis of one or more branches of the fifth nerve is not infrequently observed, and I have recorded an instance in which both Gasserian ganglia were the seat of intense syphilitic inflammation. Intracranial new growths and meningitis may sometimes cause the symptoms of a true trigeminal neuritis; but, in most instances, pain in the fifth nerve, whether of the neuritic or neuralgic type, accompanied by objective loss of cutaneous sensibility is indicative of a more serious disorder than a simple neuritis.

Neuralgia of the head and face is, on the other hand, a common disorder; and unquestionably the most distressing and perhaps most frequent cephalic pain of this type, is that known as trigeminal neuralgia or tic douloureux. I must not, however, occupy your time further than to indicate, very briefly, the more important features of this interesting disorder.

The affection is most frequent during the fourth or fifth decade and is said to be more common in women than in men, although my statistics show that the two sexes are about equally affected. Any one, or all three, of the trigeminal branches may be involved, and usually upon one side of the face only. In some cases both sides have been affected, but not simultaneously.

The diagnosis rests entirely upon the clinical symptoms. The pain must follow the anatomical course of the affected nerve; it is paroxysmal, of not more than two and a half minutes duration, and is usually induced by some form of peripheral irritation, although it may occur spontaneously. During the interval between attacks there is complete relief. Finally, the disease is never accompanied by

diminution or loss of cutaneous sensibility in the affected area. Whatever the character or duration of the pain, if a definite loss of cutaneous sensibility can be demonstrated in any part of the trigeminal region, a diagnosis of tic douloureux may be excluded.

The pathology of the disease is not known, and if the condition be a true neuralgia, the demonstration of a definite pathological lesion is, according to our conception of neuralgia, not to be expected. Nevertheless, various changes have been described within the nerve trunks and ganglia, but in some instances the histology of these structures is said to be entirely normal. The disease has been thought to depend upon a true neuritis, probably of toxic origin, or upon a definite sclerosis of the intraneural and intraganglionic vessels. These changes, however, have not been sufficiently constant to warrant a definite conclusion as to their pathological significance. The lantern-slides which are to be demonstrated presently, illustrate the most common type of arterial change within the nerve trunk.

In every case of genuine tic douloureux there are five methods of treatment from which the patient, with the physician's advice, may make a choice. Drugs, neurectomy, the injection of alcohol into the nerve trunk, injection of the Gasserian ganglion, and lastly, the major operation for avulsion of the root or removal of the ganglion, may be recommended.

The uselessness of drugs in most cases and the final necessity for some form of operative procedure has suggested to Dr. Frazier the name of "surgical neuralgia" as a suitable designation for the disorder. If, however, medicinal treatment is temporarily adopted, it is generally believed that strychnine in increasing doses is most likely to be efficacious.

Neurectomy has within the past ten years become almost entirely superseded by the superficial or deep injection of seventy to ninety per cent. alcohol into the nerve trunk according to the practice originally adopted by Schlösser; and it is with this method, together with the injection of the Gasserian ganglion that my experience has been almost entirely confined.

The technique of the injection has been fully described in the writings of Patrick, Harris, Kiliani, Levy and Boudouin and others, and I shall not attempt to give you the details of a method in which special laboratory and clinical training are essential.

The treatment is usually administered without the use of a general anesthetic, and although painful, is not unendurable. If the nerve has been successfully injected at the foramen ovale or foramen rotundum, as the case may be, there is immediate loss of sensation throughout its distribution and complete relief of pain.

The duration of relief varies from a few months to a year or more, and, occasionally, as long as five years. The average duration is approximately eighteen months, and is said to be slightly longer than that following neurectomy. The inevitable recurrence after any form of peripheral operation and, in this particular method, the painfulness of the injection are the usual adverse criticisms which have been made. Thus, it was hoped that by injecting the Gasserian ganglion more lasting results might be secured, and Tapas was the first to successfully perform such an injection. At the same time Harris recorded, independently, injection of the ganglion in twelve cases. Since then the method has become generally recognized and adopted as a desirable therapeutic measure by those especially skilled in its application.

The clinical and anatomical results following this form of treatment will be partly illustrated in the lantern slides selected from my series of cases and experiments. As in the deep nerve injection, successful impregnation of the ganglion is followed by immediate cessation of pain and more or less complete loss of sensation throughout the entire trigeminal area. The injection is no more, nor less, painful than the deep neural injection; and in one of my cases the treatment was accompanied by so little pain that the appearance of complete anesthesia was the only evidence of having successfully injected the ganglion.

The duration of relief after injection of the ganglion is not yet determined, for in some cases the relief has been as lasting after deep injection of the nerve as it has in the ganglion injections thus far recorded. My experimental studies led me to believe that though many of the ganglion cells are destroyed by the alcohol, it probably is not possible to procure so complete a destruction of the ganglion at any one sitting as to preclude the likelihood of a future recurrence. By repeated injections, however, it is not unreasonable to suppose that the remaining ganglion cells may be destroyed and thus result finally in permanent relief.

CLEFT - PALATE—ITS DEVELOPMENT, IMPORTANCE, AND TREATMENT, AND ITS RELATION TO HARELIP AND ITS TREATMENT.

By W. C. Gewin, M. D., Birmingham, Ala.

1. Cleft palate is a congenital condition that surgeons in all ages have encountered with more frequency than any other congenital malformation for which one is called upon to relieve, and the treatment, satisfactorily, requires that this cause shall be understood.

2. The development of this malformation is one of early foetal life, and is due to the nose and mouth being one cavity up to the beginning of the eighth week of gestation, at which time the palate begins to grow from either side in the form of two processes which tend to form across the cavity, horizontally, and these processes unite in the center and coalesce. If their development becomes arrested a median cleft is the result. This may be complete, or the processes may unite in some of its parts, either in front or behind, in an effort to form the roof of the mouth. Should the normal growth of these processes be interfered with the mouth will not be wholly formed. In the median line, and anterior to these processes, a median process of mesoblastic tissue comes down from above and goes to make up the front part of the hard palate, the anterior part of the nasal septum, and the middle portions of the upper lip.

The intermaxillary bone is represented in this tissue. When this intermaxillary process fails to unite with the rest of the maxilla, a lateral cleft is the result, and such a cleft may be on one side or both, and is found extending through the base of the nostrils. So the cleft which is required to be repaired may be represented by the letter Y in all of its parts. The anterior intermaxillary may be dislocated forward if both arms of the Y fail to unite, so that a median portion of the lip and palate, together with the alveolar process, bearing the middle incisor teeth, may project forward, and for this reason cleft palate is apt to be associated with harelip.

3. Should these clefts be not closed early, sucking is impossible, or accomplished with difficulty, and the food passes into the nose from the mouth, speech is imperfect, and the baby suffers the harm

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arising from this deformity. The child must be fed in a verticle position so that the food will pass easily down into the esophagus.

4. If an operation can not be done immediately after birth the mother should be instructed to press the bones of the upper jaw together several times daily, which instruction, if carried out, will tend to reduce the width of the fissure, until an operation can be done, which should occur as soon as possible. The surgeon should not be too ambitious to complete the work at one operation, because it is better to do only what can be done easily and satisfactorily, and complete the work when the conditions are satisfactory, even if several operations should be required. In no case should the surgeon operate upon harelip until the cleft palate is entirely cured. In all cases of cleft palate the operation should be done in the first three months of the child's life, because in many infants, not operated and cured, the mortality is exceedingly high. Many surgeons still prefer to wait until the child is stronger, in the face of the fact that modern methods require early operation in all these cases unless the physical condition of the infant is such that surgical proceedings endanger life. The most favorable time to operate on these cases in a normal healthy child is one day old, as the nervous system at that time is not so apt to produce shock, which in some of these cases is considerable, the tissues are pliable, and vocalization is not developed. An operation at a later date may correct the defect anatomically, but the defect in speech will remain.

5. The description of the different methods of the closure of cleft palate is not intended as these can be found fully described in any modern text book on surgery, but will mention the fact that the most favorable one are the sliding-flap operations.

6. The after treatment, following operations for cleft palate, should be scrupulously carried out. The success of the operation depends very much upon it. The child should be placed on its side with face rotated downward so that saliva will flow easily from the mouth to some absorbent material. The child should not be fed until the stomach will retain the food, but should have large quantities of sterile water for at least twenty-four hours. No solid food should be given these patients, if they are old enough to eat, for five or six days during which time, and after it is certain that the

stomach will retain what is put in it, milk, orange ade, meat juices soft eggs, custard, beef jelly, strained juices, soups, and such should be used, and sterile water after each feeding. The sutures will usually slough out, but those that remain should be removed after a week. The head should be held so that fluid will run out of the mouth and the palate sprayed with mild antiseptic three or four times a day. If the child resists this cleansing it should not be done unless the parts look infected.

7. Failure may result from infection, too great tension, or too little blood supply, but when this does occur it does not usually involve all the wound. Granulations cover the ununited edges, and other sutures may be put in. A small hole after operation may close itself. Spontaneous healing is expected in openings no larger than two or three m. m. in diameter. If they do not heal the application of the actual cautery will in most cases produce granulations, which should fill the hole and produce the closure. If the opening persists it may be closed by another simple plastic operation, which should only be performed when the parts look healthy and succulent, and not when the tissues look thin and pale. Unless some operation is done for cleft palate early, distorted formations will certainly result.

8. When an older child has been cured of cleft palate, the training of the voice becomes a very important matter. These children should be given systematic training in voice culture. Every sound and word in which they are defective should be practiced persistently until it can be pronounced correctly. A great help is to have them watch teacher's lips, tongue, and expression, while making the sound. Patience and persistence in these cases bring success. Training to speak in another tongue is useful for children who have bad pronunciation in the mother tongue. It is as great a mistake to neglect the voice of these children as it is to neglect to give them the benefit of an early surgical operation.

9. Harelip is easily cured. The operation is one of the earliest and most satisfactory operations in surgery. When cleft palate is present with these conditions, the former should be cured before attempting an operation for harelip, because the smaller mouth after harelip is cured greatly diminishes the accessibility to the cleft palate. If no cleft palate is present, the operation for harelip should be done early, say about the second day after

the child is born, provided the child is healthy and other conditions permit. Hemorrhages, in these cases, should be guarded against as much as possible, because the child does not stand the loss of blood very well. Tissue should not be removed. The edge of the deformity should be freshened by incision and dissection in preference to resection.

10. The first step in the operation consists in freeing the lip from alveolar process, so that an easy apposition of the freshened surfaces can be made. This should be done by an incision through the Labio-Alveolar fold, and a similar incision through on either side. The incision for making the edges raw for suturing should be made with a small thin knife. Allowance should be made for the contraction of the scar, which will invariably take place in these cases. If the operation ends with a symmetrical looking mouth, the result will not be good, because there will be a contraction of the cicatrix, and a dimple in the lip will be inevitable. At the close of the operation there should be fullness in the tissues about the point at which union is expected. The simple operation is undesirable because of the difficulty of this calculation. A plastic flap alleviates this to a degree. However, scar contractions should still be considered.

11. The operation suggested and carried out by Dr. Christian Fenger is the most effective in these cases. It is a split-flap operation, similar to that usually done for lacerated perineum. After the lip has been dissected from the alveolar process, an incision is made at the skin-mucosa border of the cleft. The mucous membrane flap is dissected back from either side, and united by suture, which is tied posteriorly. This dissection leaves the surfaces of the cleft widely denuded. Short transverse incisions should be made on either side for the purpose of producing slight elongations of the line of suture to compensate any later contraction that may occur. The deep sutures should now be inserted. Finally the skin sutures are introduced. Thoroughly par-affined sutures are preferable. The wound can or can not be dressed. The mouth should not be allowed to open widely after operation. This can be accomplished by adhesive placed under the chin and twisted so as not to cover the mouth, and attaching it to the forehead and the bridge of the nose. In this way one can fix the jaws so that the mouth

can not be opened enough to interfere with the operation.

12. Another operation that has been adopted by many surgeons for harelip, especially the latter form of harelip, may be described as follows: The outer side of the cleft is freshened by cutting away the mucous membrane, so that the incision extends outward on the edge of the lip for a short distance. The inner side of the cleft is seized and a flap cut through the whole thickness of the lip. The flap should be as thick as the lips are. The apex of the flap is pulled down to the center part of the first denuded surface of the outer dissection. A part of the vermillion border of the inner flap becomes a part of the rebuilt lip. Each one of these cases requires mechanical skill and judgment to calculate the size and shape of the denudation and flap. When this is done, the wound should be sutured with horse-hair, or celluloid treated thread. The coronary artery can be controlled by deep sutures. The facial and dental sides of the lip should be each closed by a row of sutures, and all the other stitches should be inserted deeply, so that the mucous membrane sutures just to the skin and the skin sutures just to the mucous membrane, and every other suture should be for approximation. No epithelium should be left on the surface that is to be covered. The preservation of the lines which represent the skin mucous membrane junction must be exact. Here, as in the operation previously described, there should be a slight redundancy of tissue forming the juncture, so that the final scar contraction will not cause a notch in the lip, as one so often observes in cases that have had these operations done. Pins have no advantage over sutures in any of these cases.

13. Many other operations have been suggested by different surgeons, but the operation here described will have good results in most cases. One may have to vary from these methods in some instances, and to suit special conditions that may arise, but this one can be done without any injustice to the methods suggested. These two operations have been used by surgeons in their discussion of single harelip operations, but in cases of double harelip, the operation that combines on either side, the principles used in the single operation are applicable.

14. The after treatment in all these cases of harelip operations should be carried out with scrupulous care. After suturing the wound the skin should be dried

and adhesive plaster placed under the chin to hold the mouth closed. Dressing on the wound is rarely necessary, but sterile cotton and collodium may be used. The child's hands should be fixed so that it can't get to the mouth. The food should be as sterily administered as possible, sterile water should be given for the first twenty-four hours after operation. Boric acid solution may be sprayed on the wound several times a day. After the third day all the deep sutures but one should be removed to prevent scarring and the remaining suture must be taken out on the fourth or fifth day. The other sutures, which seem to be cutting, should be removed if they are on the skin, if they show no signs of ulceration. The deep, posterior sutures of the mucosa, and the superficial skin sutures may be left for seven to ten days. If failure of union is present as a result of infection or defective nourishment, the infected sutures should be removed and the wound frequently dressed. After the surface of the wound covered with granulations, secondary sutures may be put in after refreshing the edges of the wound. Thus, one may snatch victory in these cases from apparent failure.

Summarizing the conclusions in this discussion:

1. It is necessary to close up the cleft palate as early as conditions will permit.

2. All inflammation must be cured in cleft palate before any attempt to do anything for the accompanying harelip.

3. One must see that the tissues around the point of union at the margin of the lip are redundant, and succulent at end of operation.

4. These children should be protected from any excessive loss of blood during operation.

5. After cure is effected, pronunciation and phonation must be cared for, so that after results will be satisfactory.

Sleeplessness. — Peacock's Bromides bring about sleep in a natural manner, that is, by producing a physiologic cerebral anemia. This well-known preparation is safe as well as effective and the administration of two to four teaspoonfuls an hour or two before going to bed will produce a sound, restful sleep, from which a patient will awaken refreshed, rested and entirely free from the depression and ill effects so common to other hypnotics. Peacock's Bromides do not disturb the stomach nor induce a habit.

ADDRESS OF WELCOME TO RETURNING SURGEONS FROM ACROSS THE SEAS.

By George Ross, M. D. (U. Va.), C. S. A., Captain and Associate Medical Director 3rd Corps, Army Northern Virginia, Lt. General A. P. Hill's Staff, Captain and Assistant Surgeon in Charge V. M. I. Cadet Battalion Battle New Market, May 15, 1864

Jefferson Hotel Auditorium, Richmond, Va., June 24, 1919.

I thank you, Mr. Chairman, for your gracious courtesy in presenting me to this assemblage, and am honored at being thought by you still a willing worker in the ranks of our profession even though the calendar charges me with having reached that period of life when the grasshopper is counted a burden. To my mind, this is an occasion when the heart should feel most, when the lips should move not, and the eyes beam their fullness of love—love and admiration and profound reverence for you, my patriot fellow-countrymen, whose splendid courage impelled you promptly, to buckle on your armor and take your places in the ranks of that mighty host of warriors who were then, and had for years, been waging a relentless battle against the enemies of right, and justice, and humanity and liberty in a tragic war of which history has no duplicate record. As surely "crusaders" they all, as were the followers of the fortunes of the never-to-be-forgotten Richard of the Lion Heart. I am a symbolic link connecting you with another great war—waged for four years, more than a half a century ago, in our own beloved country, for a constitutional right and its allied ideals. I am a veteran-member of the thinning ranks of that band of "Immortals" that shall forever be known in the world's history as "Dixie Boys" who,

Fought on battle fields uncounted,
Fought as men defeat undaunted,
Fought to throttle threatened wrong,
Fought while cheering Dixie's song,
Fought though weltering in gore,
Fought for land now named no more,
Fought to win a victor's crown,
Fought and won the world's renown.
Aye, fought for a young flag that went
down in defeat;
But 'tis wreathed around with glory,
And 'twill live in song and story,
Though its folds lie in the dust.

Tonight it is my high privilege to welcome you home—to that home that you

have so conspicuously honored on many fields in foreign lands—to your own beloved home in far-famed “Old Virginia”—to the banks of her historic river, in whose waters angled in true primitive fashion, with gaff and spear, the dusky warriors of that valiant Indian King, Powhatan, and on whose bosom the blood of her sons has been borne out to the ocean of eternity, to be forever an inspiration to the men of coming ages. I welcome you to her Capital City, near whose gateways mighty armies met in internicine conflict, and whose more than Rome-remembered hills have echoed and re-echoed the cannon’s roar, as the sons of north and south, each *patriots* from their *standpoint*, made brilliant the record of American soldiery on the fields of Yellow Tavern, Seven Pines, Gaine’s Mill, Cold Harbor and Melvern Hill. Thrice welcome to historic Richmond, where,

Colossal bronze statues grace the summit of hills,
And perpetually stand to proclaim,
To the men of all ages who love native land,
These were heroes who won the world’s fame.

Aye, welcome to this “Mecca” of our beloved Southland, where,

In poem and song,
Men stand for the right, men frown upon wrong;
Where the stranger finds welcome to the best in the land,
Where unfeigned loyalty marks the grasp of the hand.

Yes, my young friends, and never forget that an old soldier prone to paint pictures of the past, and hence

Memories these of the days that are dead;
Buried in the long ago,
Days when our nation might well boast her men
Days that tried them so.

Days when the South runs with heads lifted high,
Like the Appennine torrent unpenned,
Thrilled the world with the fame of the daring of men,
Fighting hearthstones and homes to defend.

SOME OF THE NERVOUS AND PSYCHIC EFFECTS OF INFLUENZA.*

By J. Allison Hodges, M. D., Professor Clinical Neurology and Psychiatry, Medical College, of Virginia, Richmond, Va.

The memory of the recent epidemic of influenza still abides with many of us as a horrible nightmare. The disease, by its sudden and dramatic onset, as well as by its tragic experiences, has left enduring scars upon physicians as well as patients, and today I purpose to consider briefly only its effects on the nervous system, leaving to others the consideration of its ulterior effects upon the heart, lungs, and other systematic organs.

This epidemic of influenza has been notable in many respects, but especially conspicuous for its effects upon the nervous system. In reviewing these nervous and psychic symptoms, it is but natural to contrast this present pandemic with those epidemics that have preceded it during the past thirty years. In the majority of these, the upper respiratory system, and at times the muscular and mucous tissues of the body have suffered mostly, but in this latter epidemic, in this section, the lungs and the nervous system have been chiefly and most severely indicted, though to judge from published reports, it would appear that in other sections of our country, the nervous as well as the gastroenteric forms have been inconspicuous. There can be little doubt, however, that we have suffered at this time from genuine pandemic influenza, which, after making the round of Europe, has returned to us in apparently aggravated form. It is evidently due, now, as formerly, to Pfeiffer’s bacillus, but it is also significant that, though clinically it has varied in its manifestations, yet everywhere its course has been consistently more malignant, and its mortality relatively higher than in former visitations.

Likewise, its selective tendencies in attacking certain of the bodily systems in this epidemic, has been as notable as it has been inexplicable, and in none probably more so, than in its effects upon the nervous system, for as Sir William Osler epitomizes it: “Almost every form of disease of the nervous system may follow influenza.”

In practically all of the influenzal cases which have survived, during this present epidemic in this section, the recovery of the patients has been slow and protracted, because of an unusual and undue

physical and mental weakness, and this condition of asthenia has in most cases been apparently entirely disproportionate to the duration, or intensity of the infection.

It was first thought that this post-influenza state was induced by the excessive use of depressant medication in the early stages of treatment, but latterly, when less of such medication was employed, and stimulants were regularly administered from the onset, the results were the same.

Special Nervous Symptoms.

These symptoms have been not so much those of irritability and weakness of the myocardium, manifested by tachycardia and shortness of breath on slight exertion, as of complete nerve exhaustion, with, in some cases, special symptoms of a pure fatigue and anxiety neurosis. In most nervous cases associated with influenza, also, there have been evidences of depression, but it was not usually a genuine psychosis, but a mild toxicosis, except notably in those patients who had previously been unduly "terror-stricken" at the climax of the invasion of the epidemic in their locality.

Only a few of the cases seen by me, suffered from neuralgias, and none had convulsions, though a few showed transient emotionalism and slight hysteria, and special neurologic signs have been markedly absent in the great majority of cases that have come under my clinical observation.

The nervous effects, then, have been mainly functional and symptomatic in type, with a dominating general asthenia throughout the clinical course of nearly every case, but the psychic effects have uniformly been graver and more rebellious to treatment.

Of this latter class of post-influenza cases that I have treated since October 1st, twenty-eight cases evidenced true symptoms of genuine psychoses.

Briefly stated, these psychoses may be reported for the purpose of statistical convenience and clarity, under the following groups, which though limited in number, are yet sufficiently suggestive, I take it, of the usual tendencies of this condition, to make them of a certain scientific value:

Group A—Toxic infectious delirium cases.

Group B—Encephalitic cases.

Group C—Dementia praecox cases.

Group D—Other forms of psychoses.

Group E—Unclassified cases.

On this basis the numerical incidence of

the cases was as follows:

Numerical Summary of 28 Cases.

Group A—Delirium	11
Group B—Encephalitis	3
Group C—Dementia praecox	8
Group D—Other psychoses	4
Group E—Unclassified	2

It is entirely probable, however, that these diagnoses may be somewhat changed in the later development of some of these cases, and, in fact, already two, if not three of those tabulated as "infection-toxin delirium" cases are becoming gradually more definitely symptomatic of a frank dementia praecox. This is, however, rather to be expected, for, of the eleven cases reported under Group A, only five were typical praecox cases when first seen.

The duration of the influenza, speaking specifically, as well as the time elapsing before the development of any of the psychoses, is rather indeterminate in these cases, for most of them were seen subsequent to the termination of the acute influenzal attack; but from the most reliable statements of the patients and their physicians, the usual time of sickness in bed was from five to twenty days, and the time intervening between the termination of the influenza, as thus determined, and the incidence of the psychoses engendered, was variable, but was on an average, for these cases, approximately of about twelve days.

It appears as a clinical fact, though, from a study of these cases that neither the duration nor the apparent severity of the primary attack influenced materially the post-influenzal psychotic manifestations, for, especially in the specific dementia praecox cases, as large a percentage followed the briefer attacks as did the most prolonged, and presumably more severe infections, and with this, Menninger, in the A. M. A. Journal concurs.

The record of this entire series seems to prove indisputably, then, that a period of about a week intervenes before the incidence of psychoses, except the febrile deliria, and that simple delirium occurs early in the course of the disease as an associated psychosis, while dementia praecox is invariably a post-influenzal development.

The sexual distribution of the twenty-eight cases considered, was relatively divided about equally, there being twelve males and sixteen females, and the only notable fact as to sex, was the slight increase of the cases of delirium among the females.

The age of the patients, according to the five diagnostic groups, ranged from eighteen to fifty-four, and did not tend to show that the age range was a special factor in the determination of the resultant psychosis though it was suggestive of the fact that dementia praecox was more frequent in these cases in the early half of the second decade.

The symptomatology of the cases, as presented under the five diagnostic groups, covers a variety of mental disturbances, not differing materially, however, from the same conditions arising from other causes, except that depression was not relatively as frequent a symptom.

The three cases, tabulated as "Encephalitis," were exceedingly interesting, two of them being cases of encephalitis lethargica, and the other, acute hemorrhagic encephalitis, the two former dying and the latter recovering, the former in females of middle-age and the latter in a male of thirty years, though usually occurring in persons under twenty, and more often in females than males.

Likewise, the group of cases reported as "unclassified" is interesting because of the difficulties of diagnosis, and the certainty of the course of future developments. At no period, have they shown signs of symptoms which would definitely justify a rational nosology.

Conclusions.

1st. The present epidemic of influenza in this section, has been notable for its exhaustive effects upon the nervous system.

2nd. The nervous symptoms have been mainly functional in type, and have added to the already asthenic condition of the patients.

3rd. The post-influenzal psychoses have been more serious, and have composed a variety of mental states, not different from other psychic conditions from other causes, except that there have been relatively less depressive manifestations.

4th. Dementia praecox has been the most frequent of the definite terminal psychoses.

5th. The gravity of the infection, nor the duration of the illness did not seem to indicate previously the type of the psychosis.

6th. The majority of this series of cases proved rebellious to early treatment, but continued elimination and tonic treatment have been of value in a fair proportion.

Hernia of the Urinary Bladder; Notes of Cases, with Remarks on Strangulation of Femoral Herniae and Its Treatment—Blakeway (London Lancet) says that hernial protrusion of the urinary bladder is a comparatively uncommon complication of inguinal and femoral herniae. Diagnosis cannot usually be made before operation, though symptoms and statements of the patient may suggest it.

This difficulty of diagnosis and its rarity have led in many cases to injury to the bladder during operations for relief of hernia.

The author has operated upon five cases of hernia in which the bladder protruded. Three were males and two females. The ages varied between forty-eight and seventy-one years. All were on the right side, of the direct inguinal variety in two of the males, and of the femoral type in the other three cases. A sixth case was seen in which diagnosis was made without operation.

In all the cases operated upon, the relative position of the sac and the herniated process of the bladder were similar. The bladder protrusion in all cases involved the whole thickness of the bladder wall. It was closely applied to the inner side of the neck of the sac, and in each case was about the size of a walnut. At operation it was always found collapsed and might easily have been accidentally wounded or ligated.

Any thickening about the inner side of the sac of an inguinal or femoral hernia, especially if of long standing, should excite suspicion.

Treatment of Extensive Septic Wounds.—Gardiner, in The London Lancet, contends that the chief use of gauze dressings is to protect wounds from extraneous infection, and that the objectionable features of their use can be avoided if some other means of preventing infection be provided. The following proves more satisfactory. The wound is incised and all pockets are opened up in such a way as to obtain the maximum effects of gravity in carrying away the discharges. Then an ordinary gauze packing is applied and bandaged on for the sole purpose of checking bleeding and oozing. This is removed after forty-eight hours and the wound cleansed by syringing with some mild antiseptic such as boric acid, or weak eusol, solution. A guard of appropriate size and shape is made of perforated zinc and bent to form a cradle over the infected part. This is placed in position and covered by a ster-

ile towel and a bed cradle is put on to hold up the bedclothes. The discharge which runs from the wound is absorbed by a sterile wool or sphagnum pad placed beneath the part. Twice daily, or often-er the wound is uncovered, syringed and swabbed out, the pad changed, and the zinc cradle, towel, and bed cradle are re-placed. This treatment is continued until all pockets are closed by granulations, the whole wound surface is granulating evenly, and the discharge has practically ceased. Then the wound is dressed in the usual way until completely healed. At times difficulties are encountered, such as the inability to utilize gravity fully, or the problem of keeping the part in position during sleep. The first of these is overcome by the insertion of a small gauze wick which hangs down over the edge of the wound. The second by the use of a suitable splint. The advantages of the plan are: Perfectly free drainage, absence of tendency to form pockets; absolute painlessness of the treatment; absence of all manipulation of the wounded part, and great economy in dressing materials.

Generalized Tuberculosis Infection in Nurslings.—Raimondi (Presse Medicale) calls attention to the relative frequency of generalized tuberculosis throughout the first year of life and to a less extent in the second and third years. It is much commoner in bottle fed than in breast fed infants; in the latter it is generally due to tuberculosis in the mother. Many infants die from galloping phthisis following influenzal infection. In such cases, at the conclusion of the gripe symptoms the appetite remains poor and passes into serious anorexia. Usually the infant is prostrated and somnolent, with a pale, slightly dusky color, enlarged lymph nodes, impaired resonance about the apices, and dullness between the scapulae. On auscultation there is marked puerile breathing. Unusual hairy development generally exists in these cases, and the eyelashes are very long. Later the temperature curve assists in the diagnosis, distinct vesperal fever appearing, with temperatures usually of 37.8 deg. to 38.5 deg. C. Emaciation progressively increases and the child succumbs in from three weeks to three months. In a few instances meningeal symptoms conclude the case or diarrhea hastens the fatal termination. Sometimes a distressing cough suggesting pertussis and coupled with dyspnea is noted, due to marked enlarge-

ment of the trachobronchial lymphglands. Occasionally caseous pneumonia develops, causing death within two weeks with temperatures of but 38 deg. to 39 deg. C.

A generation or more ago, the sentiment of the medical profession was in favor of descriptive names of ethical remedial agents; the opinion prevailed that names indicative of the composition of pharmaceutical agents offered ample protection against confusion. It was in conformity with this sentiment that Glyco-Heroin was selected as the most appropriate name for what has come to be one of the most universally esteemed respiratory sedatives.

But experience ultimately proved that the non-descriptive appellation affords a much greater measure of protection against confusion. Accordingly, Glykeron was selected as an alternative name for this preparation.

Glykeron and Glyco-Heroin now being synonymous appellations, and familiar as such to all dispensing pharmacists, the physician may use these names interchangeably when prescribing what was originally known only as Glyco-Heroin (Smith). Since Glykeron is the more distinctive appellation, its use is suggested to physicians when prescribing this well-known preparation for cough, bronchitis, pneumonia, phthisis, whooping-cough and kindred affections of the respiratory system.

Impeded Bile Flow.—When the bile flow becomes obstructed, unpleasant consequences soon ensue. Treatment should be promptly instituted to stimulate the hepatic function and at the same time reduce the congestion of the biliary passages. Chionia in conjunction with regulation of the diet will quickly effect these results. A teaspoonful should be given every four hours and the headache, digestive disturbance, and other disagreeable symptoms will rapidly disappear.

Facts About the Recent Epidemic.—Joltrain and Bayle refer specially to cases with high temperature and bronchopneumonia in which they obtained favorable results. They learned that these patients acquire a true immunity against further attacks. They employed many remedies—quinine, sparteine, strychnine, camphor oil in large dosage, intravenous injections of collargol and colloidal gold, antipneumococcus and anti-streptococcus serum, etc.—Le Progres Medical.

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RIGHTEOUS DEMANDS OF THE UNREFRACTED EYE.

The symposium on refraction* in the J. A. M. A. for June 21 1919, is worthy of careful study by every non-specialist physician, who has upon him the responsibility of making clinical diagnosis. Indeed, the papers and the discussions that follow reach out, even farther than that. The symposium really obligates all physicians, as a duty to their patients, to be careful of eyestrain in all of its possible relations to the cause of non-infectious systemic diseases. In a very impressive way, the papers disclose the crippling consequences to the patient, that frequently result from the unrecognized, the unappreciated, or the overlooked abnormal ocular condition, on the part of the physician, as he is working out his diagnosis.

Some things have been written about eyestrain, that are exaggerations of its importance in the causation of disease. Very plainly, they are exaggerations; and the natural reaction of some physicians to such overstatements is, to swing to the opposite extreme, and thus be made to discount almost entirely any and all claims of relationship between eye troubles, and the presence of the functional or organic disease which they may be studying. But of two physicians, the one with exaggerated ideas as to the frequency with which eyestrain is the initial cause of systemic disorders, and the other who very largely ignores the conditions of the eye, in the making up of his diagnosis, the one with the exuberant ideas, when all is told, will be found to have been of the greater usefulness to the sick. In the one case, the expense of the lenses and the possible aggravation of the troubles of the sick man by the use of worse than needless glasses, is less and are more easily borne, than are the costs of repeated treatments, and the adding discomforts, that are made necessary and that come about from the continual nerve cell irritation, from the ever present eyestrain. Probably of no other alleged hobby in medicine, can it be said, that in practice it so often works out to the good of the patient, as does the physician's extravagant

estimate of the harmfulness of eyestrain, and his overzealous attention to refraction.

Of this there can be no doubt: The eye is a very important part of the nervous system. The retina receives more impressions from the outside world, than all the other parts of the nervous system put together. Also it transmits these impressions inwards to the centers that interpret the impressions. The eye thus becomes the agent of the body, for the adjustment of the body to its environment. All this, and yet it is not to be assumed that the eye has more work to perform, in porportion to its capacity for work, than have other parts of the nervous system. It is an important structure; its working mechanism is intricate and complex; and it is because the body so much depends upon the eye, that so many different functions are thrown into disorder, by an eyeball that is out of physiologic convexity.

The symposium takes up many of the functional diseases, that are commonly known to have the tire of the eye nerves, as their origin. And as it is not very far from a simple functional disorder, to a structural disease of the functioning organ, the discussion soon has to do with organic disease that had origin in eyestrain, but which organic diseases are hard to cure with lenses. That is to say, it is hard to cure organic disease with lenses, because it took lots of time for the eyestrain to produce the organic changes; and it will take a lots of time for lenses to reduce the organic changes back again to normal. The want of time, may make the bringing about of these changes impossible; and too it often is so, that the patient is more comfortable with the nervous system and all, semi-adjusted to the long time organic disease, than with the wearing of lenses which in the beginning would have prevented the disease. Herein, is the physician's obligation to a careful study of eyestrain pointed out in the symposium. In the fact of not only irreparable damage to the patient, from the long continued irritation; but also in the years of suffering that proper refraction would have prevented, the physician sees his obligation to those who come under his care. Manifestly, the eye has a right to demand that it be given every possible help in its care of the body. And too, the eye is not altogether responsible for the functional disturbances, that its defects bring about. It is the rule to find in cases of eyestrain disease, that the eye is only

one part of a very sensitively balanced nervous system, that is easily upset; and so the diagnosis of disease in such patients, should be the conjoint work and judgement of the physician who sees the body as a whole, and of the physician who looks at systemic function through the patient's eye.

THE PRACTICAL IN MEDICINE.

If one were to interrogate the sick man, one would be told that, "The only practical thing in medicine, is to cure disease." If one were to interrogate the physician, he would say that, "The only practical thing in medicine, is to remove the cause of disease." This sick man and this physician are considered as representing twentieth century opinion, as to the efficacy of the treatment of disease.

To an onlooker outsider who was studying the matter from these points of view, and who was vainly trying to measure the distance between the devoutly believed in, but hopelessly impossible idea of the sick man, and the hopeful, but impossible task mapped out for himself by the physician; it would seem that there never could be found a common ground upon which patient and physician could meet, and where, in mutual respect and faith they could lay plans for the fighting of physical disease?

But in life as the physician finds life, there is between these points and inclusive of these points, a humanity of common interests that so much needs remedial, and palliative help; that is so heroic in suffering; that so gratefully accepts everything that is done for relief, as being the best measure possible; and that so little appreciates how far the physician comes from measuring up to the high standard, that human need has set for him—all this so inspires the physician, that his hope of some time reaching his goal, never dies out of him! Then, too, this hope that trusting humanity inspires in the physician, itself in turn fires him to an enthusiastic never ending work, that to humanity, seemingly has very much of unselfishness in it—this work so fits into his expression of heart-felt rejoicing with those who rejoice; and so fits in with his mingling genuine sorrow, with those who sorrow over the coming and arrival of the inevitable—that humanity

with something akin to reverence, lifts practical medicine to a plane level a little higher than is that of mere money getting, and thus it comes about that the belief in the miraculous power of medicine, never perishes from off the face of the earth!

More surely though, than in all this—more forcibly than through the evidence of popular attestation to the great worth to humanity of the practice of medicine, is the claim for the practical in medicine justified and established by the indisputable humanitarian works of medicine. There is no other study that so insistently and persistently tries to get at the secrets of natural laws; and that so unselfishly makes sacrifice in so doing, as does the study of physiology and pathology, in trying to get at the secrets of physical life.

This is so, not because the primary workings of physical vital forces are more confusingly hidden, than are the primary workings of other laws; but the work is done because the demands of the human mind, that it have preserved to it a brain through which it can manifest itself, unceasingly compels the study of those laws that underlie the conservation of physical structure. Medicine, in these efforts at the very self-preservation of the race, tries to meet these demands of the mind, and so puts in with the other conserving forces of humanity, the most self-critical and exacting thinking anywhere done by man!

Then, after medicine has from its investigations formulated theories, and has then done its best to refute its own conclusions, it takes the theories which the best stand up under attacks, and goes out to apply those principles to the prevention of disease, and to the alleviation of suffering. But right there—just as soon as the start is made to apply those principles in the treatment of disease, medicine meets of course, the qualifying and modifying element of human nature. And then, just as this discussion of the practical in medicine has followed a circle, and is again back to the sick man and the physician with whom the discussion started; just so does practical medicine endlessly follow the circle from the laboratory to patient, and from the patient back to the laboratory. But regardless of what the chance reader of this may think as to the worth of what has come to him from having gone through this; a cycle of medicine has never been without uplifting benefit to mankind.

THE FUNCTIONS OF HEALTH CO-ORDINATED TO THE FUNCTIONS OF IMMUNITY TOXICATIONS.

The above heading, impliedly tries to say too much. More is alleged, than can easily be substantiated by fully accredited biologic experiments. It is needless to state, that so far it has not been proven that the toxic condition upon which immunity depends, is an orderly physiologic state of the body. In fact, it may be that immunity is a continuous disturbance of physiology? and that infection is again possible as soon as the disturbance ceases, and as soon as physiology is restored? At any rate, the popular belief that perfect physiologic function is a systemic whole, that can not be improved upon as an offensive and defensive guard to physical life, is a proposition that is difficult to biologically demonstrate. Indeed, the laboratory—so far as laboratory work goes—positively points to the contrary. And so it may as well be thoroughly understood that the consolation suggested in the thought that:

"The man who was well,"

"But wished to be better,"

"Took physic and died," is no longer the unqualified teaching of scientific medicine.

If one were competent to do so, this is not the place to state the biochemical changes that are supposed to take place, or that actually do take place in the so-called fluids and semi-fluids of the body, when vaccines are introduced into the circulation. However, some change in what would be considered the normal metabolism of the body, has been produced in man in the past, and is now being produced by the use of vaccines. This has been the practice since Jenner first put the products of cow pox into man. This change—strictly speaking, possibly not a metabolic change—is acknowledged to be an improvement over physiology, in protecting the body against pathogenic exogenous infection. Looked at from the point of view of physiology, the result of vaccination is illogical. And therein is the comfort of the anti-vaccinationists; but biology is, in authority, superior to logic. And therein is the anti-vaccinationist's discomfiture.

Immunity has oftentimes been discussed in these columns, and naturally, because immunity is always in the mind, either consciously or subconsciously, when the physician is thinking about disease. Not until after the practice of vac-

cination had fully demonstrated the higher worth of a physiology, plus the toxication of vaccine, did any one for a minute entertain the thought that there could be anything better, than just physiology. But every day practice has proven, that Nature unaided, is at least somewhat less invulnerable to attack, under conditions of unacclimatization, than is Nature when aided by vaccine! Acclimatization, is the shorter word for the term,—immunity through reaction to environment; and thus used, acclimatization has been brought about, whenever a patient has recovered from disease.

In some way, systematic life is able to accept the toxic products of the infecting germ, and to appropriate the toxins to the bringing about of a biologic purpose, that will protect against another infection of the same germ. It is hardly possible to think of biology working to defeat itself. It is supposable, that in the infection of the human body which worked out immunity, biology had accomplished its purpose. Sometimes, however, the acquired immunity, is at the cost of a more or less wrecked physical body. Nature—biology overdoes it. Obviously, the toxins of immunity, are the joint products of physiology, on one side, and of bacteriology on the other. It must be—seemingly it must be that a toxine so produced, is a chemical substance which is alike protective to both the cell of animal life, and to the cell of vegetable life. But not all of the pathogenic organisms, belong to the vegetable kingdom; and so immunity against protozoa, for example, must be a chemical substance that radically differs, from the bacterial toxine.

From what has been said just above, the inference may be that the immunizing toxine is looked upon as a fixture in systemic life? Such is not the thought. The immunizing substance, is always a foreign body. Systemic life is ever trying to get rid of it. In most instances, it does some time get rid of it. Probably the most wholesale of the immunizations, is the immunity against the tubercle bacillus. So far as relates to physical suffering, this immunity is cheaply brought about. And yet it is one of the longest lasting of the immunities. In general properties, the poison of tubercular immunity may not be different from the properties of other immunizing substances; but the immunity toxine may never die out, because some tubercular scar tissue continually replenishes the otherwise lessening amount.

**COUNSEL OF NEW YORK STATE
MEDICAL SOCIETY INSISTS
LAW IS BEING VIOLATED
IN HOSPITALS BY UN-
LICENSED PERSONS
ADMINISTERING
ANESTHETICS.**

The attorney for the Medical Society of the State of New York has recently insisted that the administration of anaesthetics should be restricted absolutely to licensed physicians holding that the statutory law prohibits any one without a physician's license from giving ether or chloroform or other poisonous gas to a patient except when directly and continuously supervised by a physician. The N. Y. attorney also insists that criminal action should be brought to prevent the continuation of the practice in various hospitals as not only is the law being violated, but human lives being continually placed in danger. "If it can be shown", he continued, "that nurses, after special training were competent to administer anaesthetics, then the law should be changed to permit the nurse to have the legal right to administer anaesthetics under proper restrictions".

In a recent paper presented before the American Association of Anaesthetists, Mr. James T. Lewis, attorney, of the N. Y. State Medical Society, after paying just and even eloquent tribute to the value and importance of the modern nurse in the care and treatment of the sick shows very clearly that nevertheless there are elements concerned in the giving of anesthetics that made it unquestionably a phase of the practice of medicine as defined by law, quoting the N. Y. State Law as follows:

"A person who practices medicine within the meaning of this article, except as hereafter stated, who holds himself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition, and who shall either offer or undertake, by any means or method, to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition."

Mr. Lewis then pointed out how, in his opinion, the nurse, in administering an anaesthetic, did something more than place the cover over the patient's mouth, and that she had other duties which came within the definition of practicing medicine. "The nurse who gives the anaesthetic and sits with the cone over the face

of the unconscious patient is required to go much further. It is her duty to keep the tongue up, to watch the pulse, to pass upon the strength of the pulse, its quality, the color of the lips, the color of the skin, the condition of the skin; indeed, many other symptoms which indicate the then present physical condition of the patient to whom she is administering the anaesthetic. If that is not diagnosing the physical condition, if that is not even diagnosing the presence or absence of a disease, perhaps, then, the definition as described in our own statute means nothing.

"The operating surgeon can give no attention to the effects of the anesthetic, and if the nurse notices symptoms which seem to indicate that the patient is 'going bad' the responsibility of taking action is hers, and she must prescribe. Because some great surgeon has a woman nurse who has given an anesthetic to an enormous number of patients, and is now qualified, has no relationship to the question. Because a few nurses, through large experience, have acquired skill furnished a poor reason for saying that all nurses, however qualified, may calmly walk into a hospital, even as a nurse on probation, or a pupil nurse, and proceed with administering an anesthetic, putting in danger the life of the patient. I am convinced that any hospital sued under such circumstances might be mulcted in damages for negligence in not furnishing qualified employes and agents in the administration of their affairs."

Mr. Lewis cited the statutes and court decisions in a number of other States, and especially that of Judge Kirby in Kentucky, in which the court said: "Dr. Frank and other physicians employing trained nurses say that in so doing they assume the responsibility. When the trained nurse is known to them to be competent they may take the responsibility, but it is a responsibility, the extent of which they probably have not duly considered. In a suit growing out of the death of a patient where the surgeon had voluntarily employed an anesthetist who was not licensed, he would in the event of his brother physicians testifying in this case certainly be held responsible."

"If a doctor," continued Mr. Lewis, "operating in a hospital in the City of New York or elsewhere, allows a nurse to administer an anesthetic, of whose knowledge he knows nothing, and of whose ability as an anesthetist he is un-informed, he must expect to be held responsible for any untoward result which

ensues by reason of the giving of the anesthetic. The hospital, in turn, must be held responsible if it permits unsupervised and inexperienced women to give anesthetics, whether they be graduate or pupil nurses, because the employment of such inexperienced persons cannot be pleaded by them as a bar to an action against such institution where damage or death ensues."

RED CROSS NURSING ACTIVITIES.

The signing of the armistice found the American Red Cross with large sums of money at its command, and with views utilizing this to the best helpful advantage the authorities conceived the idea of engaging in public health work, and especially nursing. With this commendable end in view nurses were quickly sent into various sections of the union without however very definite plans as to the purposes of their activities. The result has not been wholly satisfactory to either the regularly constituted health authorities of the various states, all of whom seem to have pretty much the same experiences in seeing unorganized work being done, sometimes helpful, others possibly not, or to the nurses themselves, who have not met with the altogether cordial support we want to give Red Cross representatives in all their splendid community endeavors.

As a net result many complaints have been made, and it now appears that matters have reached a point where an early conference of authorities representing the American Red Cross and the State Board of Health was invited by the N. C. State Board of its recent Raleigh meeting.

This conference will doubtless meet soon, when the apparent difficulties can readily be adjusted. The U. S. Public Health Service, and the International Health Commission each are carrying on joint co-operative public health work in North Carolina and numerous other states, to the mutual satisfaction of all concerned, and quite naturally it is expected to thoroughly systematize and harmonize the R. C. nursing activities in this and other states so that there will be no needless overlapping of plans or energies, or the expenditure of monies with duplication of effort suggestive of lack of co-ordination of these excellent health agencies.

The new head of the A. R. C., Dr. Livingston Ferrand, has recently returned from extended overseas duty, and coming

into this place of great responsibility it is confidently expected by those who know his great organizing capacity that methods of co-ordination with other health agencies will shortly be arrived at and promulgated.

NORTH CAROLINA'S NEW PRIVY LAW.

The recent session of the N. C. State Legislature enacted a law taking effect shortly which compels the establishing and maintaining of sanitary privies throughout the state where such privy is located within nine hundred feet of the residence of any other person. Apparently one may be permitted, so far as this recent statute is concerned, to locate a closet, sanitary or otherwise, closer to his own domicile, but he manifestly shall not longer possibly afford a nidus for flies to convey infection through human faeces to others.

The state board of health recently spent two busy days at the capital devising and arranging the details of the rules and regulations shortly to be promulgated through the official bulletin, and the press, which in operation will stamp the state as extremely progressive in the matter of a state-wide effort to reduce the possibilities of fecal-borne diseases to the possible minimum. The current "bulletin" should be carefully studied by both physicians and laity and preserved for future reference. Sanitary district inspectors will regularly canvas and license privy construction.

Cod Liver Oil Requisites.

In the choice of a cod liver oil preparation there are two requirements to be met if the product used is to offer the fullest therapeutic satisfaction.

The first is that the product be therapeutically constituents of the crude oil; the second is, that it be palatable so that it is acceptable to the most fastidious stomach and may be continued for a long period.

Cord. Ext. Ol. Morrhuæ Comp. (Hagee) meets these requirements in most satisfactory fashion. In its manufacture the active elements have been retained, giving it the full therapeutic value of the oil, and with the elimination of the obnoxious properties of the crude oil, its palatability has been largely increased. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is thus an ideal cod liver oil preparation—one that may be given women and children, and with the assurance that it will produce the well known effect of cod liver oil.

EDITORIAL NEWS ITEMS

Dr. Horace Mitchell Baker, we understand, is to erect a three-story hospital in Lumberton, N. C. The approximate cost of the building will be \$40,000.

We understand that Dr. Baker is a well informed man and no doubt he will make a success of his enterprise.

Dr. Daniel M. Prince of Laurinburg, N. C., died July 17th. Dr. Prince was a man of great ability and for possibly 40 years enjoyed the reputation of being the leading physician in that section of North Carolina. He graduated from the South Carolina Medical College in 1871 and received his license to practice medicine in North Carolina the same year. In 1878 he joined the State Society and at the time of his death he was an honorary member.

Dr. David T. Tayloe, Jr., Washington, N. C., has recently graduated from the University of Pennsylvania, and is beginning his two years' service as one of the house staff of the University Hospital in Philadelphia. Of commandingly handsome physique, a pleasing personality, well grounded in the fundamentals essential for the making of a high grade doctor of medicine, and last, but by no means least, "the son of his father" whose name he has the grave responsibility of bearing, we expect this fine young man to return to his native North Carolina and grow into one of the state's strong and influential doctors.

Governor Bickett of North Carolina announced recently the following appointments to membership on the State Board of Health for terms of six years: Dr. R. H. Lewis, Raleigh; Dr. J. E. Tucker, Roxboro. Dr. Lewis' name and fame are indissolubly associated with the development and growth of public health work alike in state and nation, has served continuously on the board since 1884 acquiring a vast store of most valuable knowledge to the purpose of the board work, and his appointment is a gracious and fitting act of a governor who has the happy habit of doing and saying about the right thing at the proper time and place.

Of Dr. Tucker's appointment it may be well said, that with the desire of his excellency to recognize the dental profession on the board he could not have possibly made a wiser selection from the ranks of this most helpful specialty of modern medicine. An ex-president of the

State Dental Association, a dentist widely and well known, and an influential citizen whose community life has been most helpful, Dr. Tucker will be welcomed to membership on the board and undoubtedly prove a valuable addition.

Six Hundred Vacancies in U. S. Army Medical Corps to be Filled.—Washington authorities announce the filling without delay of 600 vacancies in the Medical Corps of the U. S. Army. These appointments appeal very strongly to young qualified doctors who may wish to see something of the big world, and to live in an atmosphere of progressive opportunities and also conducive to the development of fine character and manner. Appointments will be made to the grade of First Lieutenant and will be filled by appointments from medical gentlemen among the emergency officers now in the service, members of the Medical Reserve Corps, and former medical officers who served with credit during the recent war.

With promotions coming on after a few years these appointments should prove very attractive to our younger medical men, and all vacancies will likely be filled during the following few months.

The York County Medical Society of South Carolina held a very interesting meeting July 27th at McConnellsville, S. C. The address of welcome was delivered by Dr. Whitesides of that town. Among the papers read were the following: "Relation of Mouth Diseases to General Health," Dr. W. M. Kennedy, York; "Summer Complaints of Children," Dr. T. N. Dulin, Clover; "The Lessening of Summer Complaints in Children by the Care of Small Things," Dr. John R. Ashe, Charlotte; "Some Observations on the Habit of Spitting," Dr. D. E. Walker, Rock Hill.

Dr. Garrison of Gastonia read a paper and gave a demonstration of the treatment of a fractured clavicle. Dr. Clinton also of Gastonia, related some interesting experiences that befell him in Europe while a member of the army medical corps.

Dr. James DaCosta Highsmith, a graduate of the class of 1918, Jefferson Medical College, Philadelphia, who has been serving as intern of the Episcopal Hospital, Philadelphia, has returned to his native home, Fayetteville, N. C., and will be associated in practice with his father, Dr. J. F. Highsmith in the Highsmith Hospital, Fayetteville, N. C.

BOOK NOTICES

Transactions of the Royal Academy of Medicine in Ireland, Vol. XXXIV. Edited by J. Alfred Scott, M. A., M. D., F. R. C. S. I., General Secretary; Professor of Physiology Royal College of Surgeons in Ireland. Dublin: John Falconer, 53 Upper Sackville St. London: Bailliere, Tindall & Cox. Edinburgh: James Thin. Bristol: John Wright & Co.

Transactions of the Royal Academy of Medicine in Ireland, Vol. XXXV. Edited by J. Alfred Scott, M. A., M. D., F. R. C. S. I., General Secretary; Professor of Physiology Royal College of Surgeons in Ireland. Dublin: John Falconer, 53 Upper Sackville St. London: Bailliere, Tindall & Cox. Edinburgh: James Thin. Bristol: John Wright & Co.

Transactions of the American Pediatric Society Thirtieth Session held at the Curtis Hotel, Lenox, Mass., May 27, 28 and 29, 1918. Edited by Oscar M. Schloss, M. D., Vol. XXX.

The Theory and Action of Nephritin.

Reed & Carnrick has gotten out a very neat and attractive booklet descriptive of the manufacture and therapeutic action of NEPHRITIN.

This product is obtained from the cortex and convoluted tubules of young fresh kidneys, and contains the very enzymes and internal secretions, which the normal kidneys themselves make use of in performing their function of freeing the body of its nitrogenous waste products.

The publishers of this booklet will send a free copy to any one who will write to them at Jersey City, N. J.

"Surgery in War," by Alfred J. Hull, F. R. C. S., Lieut.-Col., Royal Army Medical Corps; Surgeon, British Expeditionary Force, France; Late Lecturer on Surgical Pathology, Royal Army Medical College, Millbank; and Surgeon, Queen Alexandra Military Hospital with a Preface by Lieut.-Gen. T. H. J. C. Goodwin, c. b. c. m. g., d. s. c. Director-General, Army Service. Second Edition with 210 illustrations. Price \$6.00. Philadelphia, P. Blakiston's Son & Co., 101½ Walnut St.

The surgical literature and experience

of past campaigns, the teachings of medical schools and text-books, have alike proved insufficient for the surgical practice of the present war. At the beginning of the war surgeons found themselves in a strange surgical land, seeing strange sights; previous experience was largely thrown aside, and they began to learn anew.

The author says the object of this book has been to give members of the profession who have not practiced war surgery an account of the treatment which has proved efficacious in our hands. Symptomology and the details of treatment, which are found in text-books of general surgery, have not been repeated. The book is not intended to be in any sense complete. Surgical knowledge is presupposed, and our efforts have been mainly directed to recounting methods of treatment of the more common injuries met with in war.

The 210 illustrations in the book are wonderfully accurate as the reviewer interprets them and certainly ought to be very valuable to the ex-army surgeon who is interested in this kind of literature. The chapters on gangrene and fractures are especially of great value. The authors have certainly pains takingly given the medical profession a carefully written and valuable book.

"Gynoplastic Technology" with a chapter on "Sacral Anesthesia" by Arnold Strumdorf, M. D., Clinical Professor of Gynecology New York Polyclinic Hospital; Consulting gynecologist to the Manhattan State Hospital; Fellow of the New York Academy of Medicine; Fellow of the American Medical Association, etc., etc., illustrated with 152 half-tone and photo-engravings in the text, some in colors, and 23 full-page plates, with 35 figures, all in colors. Philadelphia, F. A. Davis, Publishers English Depot, Stanley Philips, London.

The evolution progress, and the promulgation of its advanced basic conceptions, must of necessity contend with prevailing principles of practice, some of which are founded on theories of pathology long abandoned, some due to misdirected research or erroneous clinical deductions, while others present the mere relics of an obsolete dogma, upheld by authoritative sanction, which perpetuates surgical measures that can no longer be defended on either theoretical or practical grounds.

Attempts at plastic restoration of the injured birth canal present the very fene-sis of gynecological survey. As an art, these reconstructive procedures were developed to a high degree of perfect by the ingenuity of Simms, Emmet, Simon, Hegar, Schroeder and others, but as a science the technological principles standardized by these master minds are no longer tenable.

It has 152 half-tone and photo-engravings some in colors and 23 full plates with 35 figures all in colors which means the book is thoroughly illustrated. The author and the artist are to be congratulated in securing such accurate and fine illustrations. I have not in mind that I have looked over a book lately that is so complete and so up to date as this volume and it gives the reviewer pleasure to recommend it.

"A Manual of Exercises for the Correction of Speech Disorders," by Mary Kirk Scripture, B. A. Instructor in Speech, Columbia University (extension and summer session); Director of Speech Correction, Vanderbilt Clinic, Neurological Department, College of Physicians and Surgeons, New York City, New York; Special Assistant in Speech Defects, Medical Council of New York City Children's Hospital and School, Randall's Island; Lecturer at State University of Iowa, Iowa, 1918, and Eugene Jackson, B. A. In charge of Speech Correction at the University and Bellevue Hospital Medical College Clinic, New York City, New York; Teacher for the Correction of Speech Defects, New York Evening Schools. Illustrated. Price \$2.00 Philadelphia, F. A. Davis Company, Publishers; English Depot, Stanley Philips, London.

We have looked over this book with a great deal of interest. It contains 236 pages. The many illustrations in it are quite interesting and instructive.

For any one who is interested in defect of speech should read this book because it is full of very fine thoughts on this subject and right up to date. While it is a small book it is well worth the price.

Left Scapular Pain and Tenderness in Heart Disease and Distress.—Parkinson, in the London *Lancet*, noticed that a considerable proportion of soldiers sent to the heart section complained of pain in the back along with pain below the left

breast. He investigated this pain in the back in 100 consecutive men who came to him with the complaint of pain in the left chest. Of this series twenty-eight men also were found to have pain in the region of the angle of the left scapula. These, with the twenty-two others collected later, comprise the material on which he bases his statements. The pain is always typically localized by the patient to the area just below or internal to the lower angle of the left scapula, through this pain may be found to extend up along the vertebral border of the whole lower half of the scapula, or may be associated with complaint of pain in the posterior axillary line at the level of the lower scapular angle. The scapular pain did not seem to occur in the absence of submammary pain, which is located in one or more of the fourth, fifth or sixth interspaces. In front it may also extend up to the third or the second space. Eight of the men also complained of pain or paresthesia in the left arm, as well as in the back and left side of the chest. Usually the pain in the back is of the same type as the submammary pain and it may be sharp and stabbing or dull aching. Exertion was found to be by far the commonest exciting cause of the pain, while in a few cases the pain was also aggravated by lying on the left side. Usually the scapular pain had gradually developed after the appearance of submammary pain and it had lasted for more than one year in all but eight of the men. The commonest associated symptom was shortness of breath dependent upon exertion, and usually preceded the onset of the pain. More than a fourth of the patients also had definite hyperesthesia of the skin of the lower part of the back of the left chest, always including the angle of the scapula, but often extending far beyond it. Study of these cases led to the conclusion that whatever causes pain below the left breast is also capable of causing left scapular pain, and the latter is therefore seen in myocardial and valvular diseases of the heart, arteriosclerosis, chronic nephritis and functional heart disorders. In twenty of the fifty cases there was a definite history of acute rheumatic fever, ten of which had valvular disease. In about half of the cases no abnormal physical signs could be found. The pain and hyperalgesia about the angle of the scapula associated with submammary pain arises from the heart and belong to Head's class of referred visceral pain.

Miscellaneous.

The Diagnosis of Myocardial Debility.

—Thorne, in the London practitioner, thinks that no practitioner of experience can fail to have been struck by the not infrequent occurrence of cases displaying evidence of cardiac debility, yet showing no sign of dilation or valvular murmur on examination. There is probably no physician who has not met numerous cases complaining of shortness of breath, cold and congested extremities, palpitation, and perhaps pain in the cardiac region, and yet the most careful examination fails to reveal any evidence of organic disease. The question therefore naturally arises: Are there no means of ascertaining the condition of the myocardium? Or again, what practitioner of experience has not met with the tragedy of sudden death after apparent recovery from pneumonia or diphtheria, perhaps more often in one who appeared, on previous examination, to be in perfect health? Cannot such a calamity be foreseen and prevented? Is there no method by which we can accurately estimate the strength of the myocardium? Is there no instrument which will enable us to detect a weak and inefficient heart? The writer thinks that the differential stethoscope will supply our need. When we remember that the heart is nothing more than a muscular pump, divided into four compartments and provided with four valvular openings; that in the muscle alone resides the power which carries on the circulation; and that the valves themselves are only of minor importance, we can realize the immense value of being able to ascertain the muscular efficiency of an organ on which life depends, and which is nothing more than a muscular syringe. The latest textbooks tell with regard to the symptoms and signs of myocardial changes or debility that they are uncertain and vague, and we learn practically nothing from them as to diagnosis. In fact, our greatest physicians have had to admit in the past that no exact method was known of ascertaining the condition of the heart muscle. We see a man with pronounced valvular disease continuing his work for years in good health, provided there is adequate compensation. On the other hand, we see cases with no valvular disease suffering from evidence of cardiac debility. What is the explanation? The former has a healthy heart muscle, the latter has

not. The differential stethoscope enables us to diagnose the latter condition. The differential stethoscope consists of the usual binaural ear pieces and tubing, which are connected with a hollow aluminum chamber, divided transversely by a septum into two compartments, the upper being connected to the ear pieces by the tubing, the lower having the chest piece attached to it. The center of the dividing septum is pierced by a conical opening, into which a metal cone can be inserted or withdrawn, closing it completely or varying the size of the opening, and thus allowing more or less of the sounds to reach the examiner's ear. The position of the cone is indicated by a pointer on the upper surface of the chamber, and the figures shown there give the values of the sounds passing through the aperture with the cone in varying positions. Now it has been found by experience that the value of the first sound at the apex in a normal healthy heart is about double that of the second sound at the base. For example, in a healthy heart; if the first sound at the apex registers 3.2, the second sound at base will be in the region of 1.6; or if the former is 4.7, the latter will be about 2.4. Thorne calls this the normal 100 per cent. ratio. A ratio falling below 50 per cent. normal standard is, in his opinion, evidence of myocardial debility. To use the differential stethoscope, apply the chest piece to the apex of the heart, having previously rotated the pointer one complete revolution from left to right from the closed position, so that it stands at 0. Now slowly close it, turning the pointer from right to left until the first sound is just not audible, mark the figure of the dial, perhaps it is 3.2. Now place the chest piece over the aortic base, and repeat the same procedure, noting the figure at which the second sound is just not audible, say it is 2.4. Now we have the figures 3.2 and 2.4 giving us a ratio of about 25 per cent normal; this would indicate a weakness of the myocardium. A normal heart would probably have given a reading of 3.2, 1.6, 4.7, 2.4, or 6, 3.2. That is about 100 per cent. normal standard. While working at a military hospital Thorne has found the differential stethoscope of great value in detecting malingerers who plead heart weakness, palpitation, and breathlessness, when they do not wish to return to duty. His experience leads him to believe that it can be relied on in the diagnosis of such cases. According to the author, if his facts are

accurate, the value of the differential stethoscope can hardly be exaggerated.

Anent Typhoid.

There are said to be 20,000 typhoid carriers in the United States. Some of these, as shown by authentic records, have carried the germ for over fifty years. Four per cent of all convalescents become chronic typhoid carriers and with 300,000 new cases each year it would seem that if anything the 20,000 figure is a low one.

The value of vaccines for prophylaxis against typhoid and paratyphoid infections is as firmly established as is vaccination against smallpox or the use of quinine in malaria.

Because of the publicity that has attended the practical eradication of typhoid from the armies the laity has been greatly and favorably impressed and the idea of prevention appeals strongly to the public mind. As the natural arbiter of such questions as the one of vaccination the physician's field is a broad one and the time is especially opportune to greatly assist in the elimination of typhoid from community life.

This is the season of the year when so-called "vacation typhoid" is prevalent, much of which could have been prevented had proper prophylactic treatment been administered.

An interesting monograph on typhoid and typhoid mixed vaccines is being circulated by one of the large biological manufacturers—Eli Lilly & Company of Indianapolis. Its comprehensiveness will appeal to many of our readers interested in this subject to whom it will be mailed on receipt of requests addressed to the Lilly Company.

Treatment of Seborrhea.—Ellis (Medical Journal of South Africa) states that seborrheic eczema has every appearance of being an infective disease, probably aggravated by a toxic absorption from some body focus or possibly initiated by this latter cause. Unna claimed that it is a mild eczematous inflammation combined with seborrhea, the intensity of the eczema and seborrhea varying in different cases. It has, however, distinct characteristics which distinguish it from ordinary simple eczema both in its morphological appearance, its distribution and in the results of treatment. Its clinical manifestations vary a great deal.

Whatever part of the body is affected, seborrheic eczema is practically always associated with a variable degree of seborrhea of the scalp. In many subjects the disease is confined to the scalp but in

those liable to the complication of eczema the scalp affection appears to form a nidus from which the disease periodically spreads, producing a more or less generalized eczema.

The author points out four types of the disease:

(1) The acute form of seborrheic eczema which spreads rapidly and has a typical distribution; affecting the face, especially the eyebrow region and the nasal folds, and in men frequently the beard area. Also the ears and periauricular region, the axillae, the sternal area, the flexor surfaces of the elbows and knees, and the folds of the groins.

(2) The psoriasiform variety which simulates the morphological appearance of psoriasis but does not follow the typical distribution of the latter disease in affecting the extensor surfaces of the elbows and knees, which in this type of seborrheic eczema are often not involved. The whole trunk is generally implicated and most of the surfaces of the arms and legs, but the hands and feet are usually not affected. A considerable amount of itching is experienced.

(3) The third variety is fortunately rare, for it constitutes a grave and serious disease. It usually starts with isolated patches, which increase in size, sometimes forming a gyrated outline, and ultimately coalesce till finally every part of the body, from the crown to the soles of the feet, is affected. The irritation in this variety is intense, especially at night, and the patient sometimes exhibits a profound degree of prostration with asthenia. The surface of the skin sheds a branny desquamation with the formation of crusts, which are easily removed, leaving a dark red, highly sensitive denuded surface. This variety is most intractable, often persisting for years in spite of all medication.

(4) The fourth variety is a very chronic form of eczema, lasting not uncommonly for 10, 15 or 20 years. It often remains confined to its original restricted area on account of its chronicity, is frequently accompanied with a good deal of thickening of the skin.

A special kind of eczema should be mentioned affecting children more commonly than adults. It is manifested by medium-sized patches exhibiting a slight, fine, dry desquamation, with practically no reddening beneath. It frequently affects the face, but is also sometimes seen upon the trunk and limbs. It is readily amenable to treatment.

Some authorities maintain that sebor-

rhea of the scalp is only mildly infectious, but it would appear that a disease which is so universally prevalent is probably very easily communicated from one person to another. This communicability of the disease suggests a strong parasitic or microbic element and Van Harlington demonstrated some forty years ago that pityriasis capitis is not a pure seborrhea. The segmental and circinate form of progress of the disease markedly indicates a parasitic origin, whilst the constant primary occurrence of the disease in the scalp supports this view. Various organisms have been described as the causative agent, but their significance has not been definitely established. Unna maintained that it is due to a hypersecretion of oil from the sweat glands combined with a parasitic invasion of the skin. Four factors exist: (1) parakeratosis of the epidermis; (2) epithelial proliferation; (3) inflammation of the derma; (4) augmentation of the fatty secretion of the skin.

Cases Simulating Renal Calculus.—Newman (Glasgow Medical Journal) mentions a few cases which simulated renal calculus:

Case 1. Calcified Gland in Front of Renal Pelvis.—The patient suffered from pain in right lumbar region, the attacks not being severe and generally followed by escape of moderate amount of pus. Pain increased by exercise and relieved by rest; never associated with hematuria. Urine normal with exception that it occasionally deposited pus and oxalate of lime. Palpation of lumbar region showed left kidney somewhat larger than the right, but no tenderness on either side. Cystoscopy: slight catarrh of bladder with occasional escape of pus from both ureters in small amount; ureteral orifices normal. X-ray distinct shadow on left side just outside the second lumbar transverse process; triangular in shape. Exploration of kidney failed to discover a stone, but in front, within the peritoneum was a large calcified lymphatic gland.

Case 2. Shadow Simulating Renal Calculus on Right Side.—Lady, 31, complained of attacks of renal colic. Right kidney enlarged and unduly movable; left kidney normal size. Urine varied in appearance, sometimes being clear and at other times containing mucus, pus and large amount of uric acid crystals. Bacillus coli present. Tubercle bacillus absent. Cystoscopy: bladder normal, ure-

teral orifices normal, but on several occasions pus was seen escaping from right ureter. X-ray: distinct shadow, oval, size of shilling, at level of last rib on right side and two inches from spine.

Patient suffered an attack of influenza followed by attack of acute renal pain. Swelling in right kidney followed by fluctuation. Incision evacuation of eight ounces of thick pus. Immediately behind the kidney was an enlarged gland which, on section, contained a calcified nodule.

Case 3. Shadow in Renal Region Simulating Calculus.—Man, 46, severe pain in left side of back, coming on suddenly. No hematuria or pyuria. X-ray: four shadows, two of which might be easily mistaken for stones in left kidney and other two looked like calculi in corresponding ureter. Bladder examination showed a little hyperemia around neck, but elsewhere the mucous membrane appeared healthy and the ureteral orifices were strictly normal. Shoots good in size and regular. This contra-indicated stone, notwithstanding symptoms and shadows. Many rheumatic nodules could be felt in the parietes. Patient placed under medical treatment. Improvement.

Case 4. Pyuria of Three Years' Duration; Pain in Right Kidney.—Man, suffered from pain in right testicle; pain in right renal region. During first onset of illness he had repeated rigors, fever, discharge of large amount of pus in urine coincident with relief from pain. Subsequently other attacks. No hematuria at any time, but often trouble in passing urine. X-ray: shadow over right kidney which was enlarged and painful on pressure. Urine contained small deposit of pus and oxalates of lime. Bacillus coli present; no tubercle bacilli. Cystoscopy: bladder slightly inflamed; cloudy urine from right ureter. Lip of opening thickened and deeply injected; ridge formed by right ureter more prominent than that of left, suggesting thickening of walls of duct. Subsequently there occurred sudden stoppage in right ureter with development of pyonephrosis demanding immediate operation. The shadow was explained by a very old partly calcified tuberculosis mass at the lower pole of the kidney.

These cases illustrate three ways in which the symptoms and physical signs of renal calculus may be simulated by other conditions: (1) septic gland calcified; (2) rheumatic deposits, and (3) tuberculous calcified nodule at the lower pole of a kidney.

In forming a diagnosis we study (a) the appearance of the urinary shoots as regards size, form and frequency; (b) the aspect of the ureteral orifices; (c) the composition of the effluxes—are they normal in appearance or do they contain some morbid material?

The cardinal symptom of renal calculus is pain and the physical signs are pyuria, hematuria, a crystalline deposit, an X-ray shadow, and at the orifice of the corresponding ureter evidence of irritation as well as alternation in the character of the urinary shoots.

Radiography in the hands of the expert has become so perfect that there is strong temptation to use it as an expeditious, although somewhat summary, way of making a diagnosis. In some cases a shadow on a well-taken X-ray plate may over-ride an opinion based on other symptoms, but on the other hand, a shadow typical in respect to appearance and position of renal calculus may prove to be due to other causes.

The combination of cystoscopy and radiography is the simplest and surest method of gaining a positive diagnosis.

Nature and Symptoms of Cardiac Infection in Childhood.—Poynton (British Medical Journal) presents some of the features of rheumatic disease of the heart and points out that the first attack of rheumatism in childhood may be of any grade of severity from the most transient and vague to the rare, rapidly fatal type. In the early cases with cardiac involvement there are two important groups: The one with sore throat, arthritis, and morbus cordis; the other with chorea and morbus cordis. In the very mild cases, some degree of cardiac dilatation is to be found. In these very mild cases this is often the only evidence of cardiac involvement and must be looked for in every case of rheumatism in children, even in the absence of cardiac symptoms. It is best made out by careful percussion of the cardiac dullness with records kept by taking tracings from the points marked. The chief symptoms of this condition, aside from the slight enlargement of the heart, are shortness of breath, pallor, palpitation, and fainting attacks. The pulse is rapid and compressible. The first sound is often shortened and a soft mitral systolic bruit may be heard. In the severer grades all of these symptoms are exaggerated. The opposite picture to this mildest one is that of the most severe type of rheumatic heart infection. In this

type the general evidences of severe, acute infection are pronounced, the rheumatic symptoms marked, and the cardiac dilatation and weakness are great. Death ensues in a very brief time, with or without the development of pericarditis and evident valvular lesions. A second form of this fatal carditis is the insidious type, occurring in feeble children. Here the symptoms are not very definite, but progressive weakness and evidences of cardiac dilatation are striking. The author says that the consideration of pericarditis, and myocarditis apart from carditis is essentially artificial.

Physical Therapy in Sciatic Neuralgia.

—Faikin (Journal de Medecine de Bordeaux), regards physical measures as far superior to drug treatment in true sciatica and as being indicated whenever the use of drugs for ten or fifteen days has failed to yield notable improvement. Even where drugs prove beneficial, physical treatment should be added to hasten recovery. Such treatment is likewise useful in sciatic neuritis, though here results are more slow in appearing. Three forms of physical measures are available, electric, thermic, and kinesthetic. In using the galvanic current, the negative electrode, measuring about fifteen by twenty centimetres, is placed on the buttock at the point of emergence of the nerve; the foot is dipped in water, which constitutes the positive pole. The intensity of current should be gradually increased to twenty, or in long standing cases even to forty or fifty milliamperes. Daily treatments of ten or fifteen minutes duration are indicated. In sciatic neuritis, when pain has been allayed it is well to add faradic treatment of the affected muscles. In intense and rebellious cases, high frequency treatment should be given every other day, in alternation with the galvanic current. Diathermy is also capable of doing good in such cases. The most important of all measures for sciatica, whether employed alone or in combination with other physical means, is the hot air treatment. For this purpose the ordinary hand operated apparatus, yielding a temperature of eighty to 100 degrees C., is sufficient. The applications should be prolonged to the extent of producing intense rubefaction and be made over each painful area. The hot air should be applied in concentric circles, excessive heating of any given point being guarded against. Daily treatments should be given. If the galvanic current is being used,

the hot air should follow it after a rest interval of one half to one hour. Kinesiotherapeutic treatment comprises massage, mechanotherapy, and re-educating exercises. Manual massage is serviceable from the onset of the disorder. Effleurage is the first step, to be followed, as improvement occurs, by pressure, pinching, kneading, and vibrotherapy. The latter, whether manual or instrumental, has distinct analgesic properties. Mechanotherapy consists in extension of the nerve—at first, if necessary, with the knee flexed, later with the knee extended. In the re-education exercises the patient is made to walk slowly and correctly, each movement made being carefully supervised until the patient is able to overcome all abnormal antalgic positions during locomotion.

Diagnosis of Syphilis.—Meldon (Dublin Journal of Medical Science) states that notwithstanding the various reports to discredit the reliability of the Wassermann test from a theoretical standpoint, clinical experience has demonstrated that the Wassermann reaction is a reliable clinical test for syphilis. So far as syphilis of the central nervous system is concerned a positive Wassermann in the cerebrospinal fluid is practically conclusive evidence of syphilitic disease of the nervous system, the only exception being in the case of a patient with a positive reaction in his serum who is suffering from a non-syphilitic meningitis. A negative Wassermann reaction indicates that the nervous system is not involved, with the following exceptions: (1) In very early acute meningitis, during the secondary stages the fluid may be examined before it has had time to become positive. (2) The fluid may become negative owing to treatment, but on account of the disease not being fully eradicated relapse is possible. (3) In some cases of purely cerebral lesions the fluid drawn off by lumbar puncture may be negative.

Regarding treatment of syphilis, the method that the author adopts is to give a course of some six or eight injections of salvarsan or neosalvarsan, combined with mercurial treatment extending over a period of about twelve weeks. In early syphilis this may suffice, but in later cases more treatment may be required. There is one point in the treatment which requires special mention and this is the local treatment of the chancre, for it is here that there is most danger of some spirochetes escaping and giving rise to a recurrence. In nervous syphilis experi-

ence has shown that intravenous injections of salvarsan and neosalvarsan are just as effective as intrathecal injections of salvarsanized serum.

Treatment of War Headache.—Rawling (British Medical Journal), says that these headaches usually date from the moment of recovery of consciousness and occur most severely in cases with intact skull or very small injuries; following frontal or temporal injuries; and after wounds in the region of the vertex. The headaches studied all followed gunshot wounds, concussion, fractured base, etc. In his opinion the headaches are due to some increase in intracranial pressure, in the great majority of cases to cerebral edema. Medical treatment should be tried in the form of rest in bed, dieting, drugs, and lumbar puncture, but in most cases will fail to give relief. Then resort should be had to trephining the skull with incision of the dura, the opening being made beneath the temporal muscle and not closed, but left so that the excess of cerebrospinal fluid can drain into the subtemporal tissues and be absorbed. This treatment is safe, simple and gives relief in the majority of cases.

Practical Importance of Vitamines.—Hopkins (British Medical Journal), reviews the facts with reference to the importance and occurrence of vitamines, emphasizing the small amounts present in any single article of food and the fact that artificial methods of preparation often remove even those small amounts. The doctor stresses the practical importance of our knowledge of the vitamines and points out that partial deficiency, while it does not lead to the development of one or other of the recognized deficiency diseases, still may account for a considerable measure of malnutrition and indefinite illness. The modern bread supply, consisting very largely of white flour, which is lacking in vitamines may be a potent factor in the production of both malnutrition and illness when, through poverty or other conditions the dietary is composed largely of that staple food, together with canned meats and vegetables and a deficiency of fruits. These conditions prevail in certain classes of the community. It is probably true that the normal appetite and desires of man would lead to his selection of a sufficient dietary, but extraneous factors have so modified this selection that under conditions of civilized life there is danger of man's taking an insufficient amount of the vitamines.

containing foods. This matter rises to special importance in the case of the nursing mother, for it has been shown that animals apparently are incapable of forming vitamins, but derive them wholly from the vegetable realm. If then, a mother does not receive a sufficiency of vitamins, her milk will be similarly deficient and her infant will suffer from their lack. The whole problem deserves far more general consideration than is yet given to it from a public health standpoint.

Preoperative Demonstrations of Malignant Metastases.—Whiteford, in *The London Lancet*, mentions a case in which silent metastatic growths were demonstrated roentgenographically in the mediastinum in a patient with an otherwise easily operable cancer of the breast. The writer then emphasizes the fact that the thoracic cavity may be the site of early, silent metastases in nearly every form of malignant disease. These metastases can usually be demonstrated by means of radiography, and their discovery will save many a patient from utterly useless operation and will improve the recovery records of early radical operation. It should also be possible to demonstrate metastases in other regions than the thorax. The examination for such metastases should be made as a routine before operation is undertaken.

A Vertible Prop

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e. the blood itself. To construct new red cells, and reconstruct those which have become de-hemoglobinized by disease nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to reconstruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

Endemic Malaria as a Military Problem.—Haughwout (*Philippine Journal of Science*), points out that the recruiting of men to form army units from areas where malaria is endemic or epidemic is certain to bring together many who, while apparently well, are carriers of the malarial parasite. Such carriers, in the presence of anopheline mosquitoes, are a source of peril both to any community that is comparatively free from malaria and to their own comrades. When undergoing the fatigue and exposure of military training, they are extremely likely to develop the disease in its active form. Especially is there danger to neighboring troops if attendant conditions are such as to render anti-mosquito measures impracticable and quinine prophylaxis applicable only with difficulty. To obviate this, carriers among recruits should be carefully sought out. No reliance should be placed on the simple examination of blood films, but use made of concentration or cultural methods, supplemented in the negative cases by provocative measures such as the administration of adrenin, ergot, pituitary extract, strychnine, quinine, or horse serum, or irradiation of the spleen with the quartz lamp. These provocative measures tend to awaken the latent infections and bring the parasites into the peripheral circulation, where they can be destroyed by the usual specific treatment. If quinine fails to act and is not being sufficiently absorbed, adjuvants or some other form of treatment should be used. If all measures prove fruitless, the recruit should be honorably discharged from the service. From the surgical standpoint, the tendency of latent malaria to become active under the influence of wounds, operations, and anesthesia should be borne in mind.

Technic for Constricting the Eustachian Tube.—Urbantschitsch (*Monatsschrift für Ohrenkrank und Lar-Rhinologie*), opens his paper with a question of priority by stating that the technic was recently published by Blumenthal in the same periodical (Nos. 9 and 10) was already described by him eight years ago. Urbantschitsch uses grooved celluloid bougies and rubs the tube until it bleeds. When the discharge of pus has ceased the Eustachian canal can be also rubbed from the cavity of the tympanum. The writer has had a tympanum catheter constructed for this special purpose. The doctor considers the celluloid bougie more advantageous than Blumenthal's metallic sound.

Remarks on the Pathogenesis of Deficiency Diseases and on Pellagra.—Rondoni in the British Medical Journal refers to the work of McGarrison on the changes in the organs of pigeons fed on polished rice and suffering from polyneuritis, and calls attention to the results obtained by himself several years ago when working on other deficiency diseases and published in the Italian review *Sperimentale* in the summer of 1913. He states that, after working for some years on the pathogenesis of pellagra, he was unable to uphold the photodynamic theory of Raubitschek; nor could he find any precipitins in the serum of pellegra patients or demonstrate any positive complement fixation between serum of these patients and maize extracts. The doctor did, however, find hypersensitivity to the injection of maize extracts in patients suffering pellagra and points out that Volpino has done a great deal of work on this subject. Later he adopted the view that pellagra should be regarded as a deficiency disease. Rondoni then resumes the results of experimental researches made on the 'maidism' of guinea pigs. The writer refers to the facts that exclusive maize feeding rapidly brings about a pathological condition in guinea pigs, which die in about three weeks after having lost about one-third of their weight, suffering in the last period of life from loss of hair, weakness of the legs, and diarrhea; and that, when fed on cereal grains alone, these animals develop a typical scurvy-like condition with lesions of bones, bone-marrow, teeth, and blood vessels—the last occasioning a real hemorrhagic diathesis. After reviewing briefly the work of McCollum and other observers the author states that in 1913-14 he worked on the effects of maize feeding guinea pigs, publishing his results in 1915 and 1916, his object being to show the differences between the more typical scurvy and the conditions produced by feeding on maize; also between scurvy and pellagra and simple starvation. Like McGarrison, he measured the weights of various organs. The doctor found that in all the conditions mentioned the adrenal glands were enlarged, though principally in oat-feeding and maize-eating guinea pigs, and that while the loss of body weight was only one-third, the relative weight was almost doubled. The spleen was reduced in weight, chiefly in the oat-eating and in the starving animals, and some evidence was found of an atrophic

condition of this organ, as was the case in McGarrison's pigeons. He summarizes his histological observations thus: The organs which were the most affected in guinea pigs fed on maize were the spleen, the thyroid, and the supra renal glands. The spleen showed sclerotic lesions with increase of elastic and fibrous tissue reduction of lymphocytes in the folliculi. The thyroid showed, in the first days of the maize diet, hyperemia and often proliferation of alveolar epithelium, then hemorrhagic changes and later on sclerosis. The writer remarks that these changes, which he believes have not been observed before, may be compared with those noted by other observers in the thyroid of starving animals or of animals fed on special diets. The suprarenal glands showed hyperemia, enlargement of minute vessels, degenerative changes in the cortical cells with disappearance of the normal lipoids, perhaps slight proliferation in the cells of the outer cortical layer; the reticular fibers were thicker, and the reaction with chromium salts in the medullaries seemed to be less marked. Degenerative changes were prominent in the central nervous system. By means of Nissl's method, this observer was able to note signs of decay in the anterior horn cells of the spinal cord and in Purkinje cells of the cerebellum, and by Marchi's method frequent irregular fresh degeneration of all sorts of medullated fibers. Changes in the bone marrow were of the same nature but less in degree than those observed by Frohlich and Holst as the result of other cereal feeding. Lesions of the liver, kidney, heart, and intestinal tract were less marked. In guinea pigs fed on oats the hemorrhagic lesions were more marked and the author is of the opinion that the hemorrhagic diathesis belongs to the typical scorbutic condition of the animals. It would appear from the author's experiments that the central nervous symptoms, fall of hair, sclerosis of spleen and thyroid are more marked in maize-fed animals. The differences between the effects of these unilateral diets and starvation are that in starvation there is no true sclerosis of organs, the disappearance of lipoids from the cortex of the adrenal glands is much more marked, and the bone-marrow conditions differ. Histologically, death from maize-eating is not death from starvation, but involves deep metabolic changes as in other real deficiency diseases and in some intoxications. In order to study the reason of the

severe injury caused to the organism by maize feeding, the author attempted to supplement the maize meal or kernel with other substances. He found that the addition of casein, peptone, or amino-acids produced no definite improvement. One year later (1916) McCollum, Simmonds and Pitz showed that the maize protein contained all necessary amino-acids, but not all in the most favorable proportions, that the deficiency of maize could not be made good with casein, and that the protein factor had not the paramount importance for rats that it seemed to have for other animals. Hogan drew attention to the lack of salts in maize diet. The author points out that though he did not take into account the salts, he had already written that the protein deficiency of maize did not seem to have any great importance for guinea pigs in the development of maidism, and that Hogan's experiment of supplementing maize with casein had been made by him with the same negative results. Hogan stated that pigs were on a different basis and that here protein was the limiting factor; this had already been demonstrated by Passerini, whose experiments were unknown to the Americans. The author also made some experiments on the prevention of scurvy by supplementing the maize diet by green food and found that 10 grams a day of fresh cabbage produced a remarkable corrective action and materially lengthened the life of the animal. Thinking that possibly there might be in cabbage some lipid-bound substance or vitamin-like principle, the author then tested the action of alcoholic extracts of cabbage with positive results, thus prolonging the life of the animals. In the light of McCollum's ideas, he believes that he partly supplemented the fat-soluble factor A, which is lacking in all cereal grains and maize and is abundant in all leaves. From the results obtained by Osborne and Mendel it would seem that the water-soluble vitamin B is absent in cabbage. An attempt to supplement maize meal with an alcoholic extract of maize brand failed, whereas, alcoholic extracts of liver prolonged the life of the animals a little. The author therefore came to the conclusion that in animal organs and in the green parts of plants there must be some alcohol-soluble body which diminishes the harmful action of maize diet on guinea pigs.

Children and Cod Liver Oil

A quality of most cod liver oil preparations which makes them objectionable to children, is their unpalatableness, which becomes marked as the patient continues with it. As a result of this obnoxiousness of the average cod liver oil preparation, the choice of one for continued use for children is a matter of the utmost importance.

In Cord. Ext. Ol. Morrhuæ Comp. (Hagee) the physician has a preparation of cod liver oil which is effective therapeutically and at the same time palatable to the most fastidious taste, making it the ideal cod liver oil preparation for children. While Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is palatable and may be administered for long periods, it is just as effective as the plain oil, containing every therapeutic property of the plain oil.

After being closed for two years due to government restrictions prohibiting visitors from the stock yards because of the war, Armour and Company's huge plant in the Chicago Stockyards is again open to visitors, an announcement from the company states.

This announcement will prove of interest to not only people who intend to visit Chicago some time this summer but to many others as well because, the announcement says, "preparations are being made by Armour and Company to open their other plants in various parts of the country so that a trip through a packing plant which is an educational one, will not just be limited to Chicagoans or visitors to Chicago, but to people in fifteen different parts of the United States, where Armour and Company have packing plants. Uniformed guides are in attendance to explain the various interesting things to be seen."

Plea for Homogeneous Graft.—Fisher (British Med. Journal), draws upon his most extensive experiences and observations when he says that he has seen no instance of recovered nerve function where bridging of a gap has been done with foreign material, or where the nerve ends have been connected with a wrapping of fascia, Cargile membrane, or vein. Something more than a conduit is required for the regeneration of several nerves. Restoration by careful suture gives the best results, but even in future the conditions are not so simple as commonly thought. The nerve is made up of a se-

ries of bundles of fibres, each bundle being largely fibres of a single function. Sutures should be carried out to prevent the improper distribution of these fibres within their channels so far as possible and this can be accomplished with considerable accuracy by careful observation of the oval contour of the nerve and approximation of the two ends anatomically correct. All scar tissue distorts the course of nerve fibres in their growth and must be removed and not permitted to reform, the latter being accomplished by accurate approximation of the neural sheaths. Finally, when the gap in a severed nerve is too great to permit direct suture of the nerve, the most satisfactory method is by the insertion of a homogeneous graft, taken, not from one or more small subcutaneous nerves, but from a mixed nerve of equal or larger size than the damaged one and inserted with the greatest care and accuracy. Such homogeneous grafts can be obtained from amputations and from amputation stumps which require secondary operation. That such a method grafting may be remarkably successful is illustrated by the record of a striking case.

The Relief Of Functional Depression.

The conditions under which the majority of people have lived during the past few years have led to widespread nervous depression and debility. Overwork, worry and restricted or changed diets have all tended to cause derangement of bodily functions. To correct and overcome these conditions of general weakness and debility, vigorous tonic treatment is invariably needed, and for this purpose there is no remedy that will be found more promptly and uniformly effective than Gray's Glycerine Tonic Comp.

Under its systematic use, combined good food and hygienic care, the digestion is improved, the nutrition is aided and promoted and the vitality of the whole body raised substantially. The nervous and mental condition of these weakened and debilitated patients shows a gratifying improvement in every way, and in what is often a surprisingly short time they regain their strength and vitality, with complete relief from their systemic depression and loss of bodily energy.

The use of Gray's Tonic Comp., together with painstaking regulation of the hygiene and diet has undoubtedly saved many of these cases of nervous depression from developing into graver ills.

Cerebrospinal Syphilis—Dinnick writes in *The London Lancet* that the manifestations of cerebrospinal syphilis may vary from dull, persistent headache, vague neuritic and trophic signs to petit mal, epilepsy, or psychic disturbances; from basal meningitis to pseudo-tubercles; from cranial nerve affections and choked disc to myelitis. Generally regarded, these lesions occur comparatively early, are rapid in onset, and wide in nervous manifestations; are accompanied by very marked changes in the spinal fluid; and respond well to judicious but energetic treatment. Often the lesions are so focalized as to justify the presumption of their being gummatous in origin; others suggest a more diffuse meningeal infiltration, as in pseudo-tubercles; others, again, from paucity of spinal fluid cellular count are recognized as syphilitic endarteritis. These cases of non-parenchymatous nervous syphilis are very often accompanied by suggestive pupillary findings—varying from fixity, irregularity, and sluggishness to loss of the light reflex.

Treatment of Gunshot Wounds of Bladder.—Kidd (*British Medical Journal*) says that the following methods are used in gunshot injuries of the bladder: 1. The intermittent use of the catheter. 2. Immediate suprapubic cystotomy. 3. Regular periodical expression of the urine. 4. The use of the tied in catheter. Of these the two first do not fulfill the conditions and should be abandoned. The author has employed the fourth method with the greatest success when certain very necessary precautions have been observed, but he is inclined to believe that the third method, when properly carried out, may prove to be the best. The doctor's plan of using the tied in catheter is to irrigate the anterior urethra thoroughly with a quart of warm water containing two drams of the oxycyanide of mercury and then to pass a sterile soft rubber catheter of No. 9 or No. 10 English scale. The urine is collected in a bottle. The catheter should be changed every fourth day, the urethra being irrigated at each change.

Congesive Headaches Of Hot Weather.

Again the hot weather is with us, and as usual the majority of the American people, after a year's hard work and nervous tension, are looking forward to vacation relaxation. Most of those who can, and there are few who cannot, will seek a change of scene and expose themselves

to conditions which in many ways will be widely different from their usual manner of living in their own homes.

But whether the individual goes on a vacation or not, the summer heat will still be with him. Even so called outings at nearby lake and sea shore resorts, all too often result in undue exposure to the sun, over-exertion in endeavor to keep going with the crowds, and eye strain due to the glare of the water.

Heart action is increased, arterial tension raised and congestive headache follows as a natural sequence. A general derangement of the circulation takes place, and usually calls for immediate relief. The headache in particular must be relieved and the nervous mechanism quieted, while normal organic activity must be maintained.

Phenalgin is a remarkable serviceable remedy in these cases, for it acts at once and most efficiently, to reduce vascular congestion. This with its direct sedative action upon the nervous system promptly alleviates the headache. A particularly gratifying feature, moreover, lies in the fact that although relief from pain is immediate and complete, no undesirable after effects such as those which follow administrations of many other anodyne measures, narcotic drugs especially, are observed. Normal function is in no way interfered with; indeed the secretions are augmented—an effect which is of special value in the type of congestive headache due to summer heat. Free secretion in these cases during the hot weather must be maintained above all things.

Medical men will add greatly to the vacation pleasures of patients subject to headache, if they give them a supply of Phenalgin to take with them. An advantage of Phenalgin which the busy practitioner will appreciate is that, containing no narcotic ingredients, its use does not necessitate special blanks, special records, or the other bothersome requirements which must be met in using narcotic drugs.

Features of the Recent Pandemic.—Gouget lays stress on some phenomena studied at the height of the pandemic. One of these was total absence of any discharge from the nose, along with extreme rarity of any sinus or ear location. By contrast anginas were common. The alleged polymorphism he scouts. All of the cases seen were thoracic, whatever chance affections might have coexisted. Hemorrhages were a feature, some of rare

character, as intramuscular hematoma. At autopsy edema of the lungs was never absent. Fibrinous exudate was very slight in degree, and the pneumococcus could be exculpated as a cause. The disease was very severe in those with old lung affections—simple chronic bronchitis, emphysema, thoracic deformity, cardiopathies and tuberculosis in full evolution. It was objected that the author dealt essentially with hospital cases and that his description did not hold good for healthy extrahospital patients. In the latter class the condition was apt to be like a general infection from which even pulmonary lesions might be absent.—*La Presse Medicale*.

Cancer of the Tongue.—Power (*British Medical Journal*) considers it theoretically possible to reduce cancer of the tongue to the subordinate position it occupied in man before the seventeenth century, and which it still holds in the domestic animals. This can be effected by a thorough treatment of syphilis in its initial stages. Persons who are being treated for syphilis should be told never to smoke, not to drink to excess, and to pay regular visits to the dentist. Such advice should be given whilst the patient is still under treatment and should not be deferred until the tongue had become sore. Failure to follow this advice or a continuance of the treatment of syphilis on ineffective lines will be followed in all probability by a very large increase in the number of patients with cancer of the tongue. This increase should begin about 1950, and should affect women as well as men, for syphilis is now more widely spread amongst the younger generation than it has been for many years past and both sexes smoke much larger quantities of tobacco than ever before.

Primary Sarcoma of the Prostate.—Newman (*British Medical Journal*) records the case of a young man who received an injury to his perineum and testicles. This produced slight hematuria and some difficulty in voiding. Two months later he had almost complete retention of urine. Urine, removed by catheter, contained both pus and blood. Rectal examination revealed a soft, smooth, round enlargement of the prostate. He was subjected to suprapubic cystotomy and the entire prostate was found occupied by a soft fungating growth. The growth proved to be round cell sarcoma. It sprang from a small cavi-

ity with well defined walls. The tumor was removed, but in two weeks it had recurred and was of larger size than before. The important features in this case seem to be the primary existence of a small, well encapsulated sarcoma which had given no symptoms and which perhaps would have remained dormant for a long time were it not for the trauma which caused a rupture of the capsule, and permitted its rapid growth. Further points of interest are the rarity of primary sarcoma of the prostate and the difficulty of diagnosis while the tumor is still sufficiently circumscribed to be successfully removed.

Treatment of Hemorrhoids with Richet's Crushing Forceps Cautery.—

Bazy (Bulletin de l'Académie de médecine) advocates, after prolonged experience, the use of the Richet method. The anus is first forcibly dilated with Trelat's dilating speculum. Spontaneous extrusion of a mass of hemorrhoids frequently follows, or at least, the hemorrhoid bearing areas become visible. The first mass of hemorrhoids is then drawn down with volsella or forceps, and a slightly curved needle to which a copper wire has been soldered passed in slightly above the mucocutaneous junction and caused to emerge as high up as possible. The piles are held down with the copper loop alone, the forceps having been removed. The same procedure is repeated with the two other hemorrhoidal masses usually present, with resulting formation of three pedicles, approximately equidistant. Next the anus is surrounded by rather thick compresses wet with the cold water, and the Richet forceps cautery, previously heated to a cherry red color on a charcoal fire, closed firmly against one of the pedicles. In order that the forceps cautery may carry sufficient heat, its jaws are made very thick, each measuring two centimetres by one centimetre by five centimetres. The hemorrhoidal mass is gradually destroyed by the heat and reduced to a thin, blackish, parchment like layer. The same procedure is carried out for the other two pedicles, and there remain three dark furrows disposed in a radiating manner and for the most part disappearing in the rectum. The operation is quite bloodless and therefore appropriate in patients who have already lost considerable blood. Added advantages are the rapidity of recovery, relative absence of after pain, and constancy of therapeutic results. The dressing con-

sists merely of a wick impregnated with petrolatum and inserted in the rectum; later, irrigations and enemas are administered. Many patients are so little inconvenienced that a postoperative injection of morphine is unnecessary. Extension of the effects of the cautery occurs beyond the radiating furrows to any hemorrhoids that have remained uncauterized, and there results a complete destruction, or direct or indirect, of all the hemorrhoids. Patients leave the hospital in four days. Neither recurrence, sphincter relaxation, nor incontinence of feces follows the operation.

After the Long School Year

the tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic. With the coming of warmer weather, this depreciated condition becomes accentuated and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells, and hemoglobin, and employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and assimilable organic combination of iron and manganese, the agents most needed for blood repair, and general reconstruction. It is pleasant to take, and does not irritate the digestive organs nor cause constipation.

A Method of Overcoming the Adherence of Tendons after Suturing.—

Collingwood Fenwick (British Medical Journal) points out that septic gunshot wounds of the hands and feet often involve important tendons, and if these cannot be satisfactorily dealt with they become adherent to the surrounding structures and the function of the limb is more or less impaired. Here is an instance: Private J. B. was admitted to the Norfolk and Norwich Hospital with a shrapnel wound on the posterior surface of the left hand. The wound was very septic and the whole hand swollen and edematous. He was unable to extend his three inner fingers, as about two inches of the tendon of the extensor communis digitorum had been blown away. He was given saline hand baths and boracic fomentions. After about six weeks the wound had healed; he was sent to a convalescent hospital for three months and

during that time he was given massage and faradism to the muscles of his forearm. On his return to the hospital Dr. Fenwick operated upon his hand, making an incision from two inches above the posterior annular ligament to the knuckles. The remaining portion of the extensor tendons were involved in scar tissue and it was somewhat difficult to dissect them out. A flap of the tendon of the extensor communis digitorum was brought down from above the ligament, which was not interfered with, and at its distal end was split into three parts and stitched with silk to the cut tendons of the three inner fingers. To prevent the newly constructed tendons from becoming adherent to the scar and surrounding tissues, thick catgut was wound round each tendon as far up as the annular ligament. The wound was then stitched up with salmon gut and the hand placed on a flat splint. Three days after the operation the splint was removed and the patient allowed to move his fingers slightly. Two weeks later faradism was applied to the muscles of the forearm, and it was found that the extensors of the fingers were working well.

Laxatives and the Physician.

When you prescribe a saline laxative you expect to remove as quickly as possible from the gastro-intestinal tract the retained products of food ingestion and other toxic substances which are harmful to the patient.

The laxative should be prompt and efficient in its action—thoroughly evacuating the colon, if possible, without griping or discomfort.

For such a laxative we recommend PLUTO WATER. It stimulates intestinal secretion and movement and with varying dosage acts as a mild aperient or a free cathartic.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

The Eugenic Marriage.—The new Norwegian marriage law came into force on January 1st, 1919. It may not represent the unadulterated eugenic ideal, but it is so great a step towards it as to be almost revolutionary. It contains eighty-one sections, but the following are some of the salient points: A man under 20 and a woman under 18 may not marry without the consent of the authorities. Birth and

baptism certificates must be produced before the banns are published. Under certain conditions, one or both of the contracting parties may be required to show that they have not been insane. Both must declare in writing that they are not suffering from epilepsy, leprosy, syphilis, or other venereal diseases in an infectious form. In the other alternative the subject of any of these diseases must prove that the other party to the marriage contract is cognizant of the fact, and that both parties have been instructed by a doctor as to the dangers of the disease in question. The doctor concerned is not to be tied by professional secrecy and is bound to interfere if he knows that any one of these diseases is being concealed by either side. A written declaration must also be given by the candidates for marriage as to previous marriages and to children born to them out of wedlock. The marriage may be nullified if it is subsequently proved that insanity or any of the above diseases have been concealed, or if an incurable morbid condition, incompatible with married life, exists. Dissolution of the marriage may also be claimed if false declarations have been made or obstacles concealed. Again, if the woman has become pregnant by another man, or if the man has rendered another woman pregnant and this has not been revealed, dissolution of the marriage may be claimed, whether the child of this irregular union be born before or after the marriage; such a claim must be made within six months of the facts becoming known to the claimant. No woman may marry again till ten months after the termination of her previous marriage if she is pregnant at this period. Many other causes are defined as valid for the dissolution of marriage, and it is evident that henceforth in Norway it will often be difficult to marry in haste, and that the facilities for escaping from a hasty, ill-judged marriage will prove to be numerous and varied.—British Medical Journal.

Male Pseudohermaphroditism.—Girou, in the *La Presse Medicale*, mentions the case of a supposed girl who came to operation for left inguinal hernia. The condition proved to be an ectopsy of a testis as shown by the result of operation and microscopy. There was a pseudovula present which would have deceived the average anatomist. The clitoris (in reality penis) was 2 cm. long and a hypospadias extended downward to the meatus. The

labia majora and nymphae were perfect. The vagina was a mere dimple 1 cm. in depth. Another gonad was apparently present on the opposite side in the inguinal ring. The breast was masculine, as was also the voice. The upper lips showed a rudimentary beard. There was nothing to suggest menstruation. The subject was quite indifferent to men and was psychically a female.

A Physician's Experience.

The best all-around medicine for continuous and daily use, fool-proof and non-injurious, quick acting and soul-satisfying is a morning glass of Pluto Water, together with a glass of plain water at least fifteen minutes before breakfast, taking just enough to produce one daily stool, writes Dr. H. N. Jennett of Kansas City, Mo.

The absence of griping is a marked characteristic of Pluto Water. This is due to the fact that it acts as an intestinal bath rather than as an irritant of the mucosa, as characteristic of most cathartics and even calomel. The advantages of this kind of elimination are apparent, especially so when the continued use of laxatives become necessary.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

Antimony Tartrate in Bilharziosis and Tachycardia.—Christopherson (British Medical Journal), says that the tachycardia reputed to follow the therapeutic injection of tartar emetic in bilharziosis is not necessarily due to the drug. The doctor suggests that in many cases tachycardia would be found before treatment if looked for and offers, as an explanation for the rapid heart, the simultaneous infection of the subjects of bilharziosis with one or more of a large variety of intestinal protozoa and parasites. He therefore urges that the feces of all patients with bilharziosis be examined for such other parasites while the use of antimony is still on trial, so that this valuable drug may not be unjustly blamed for effects which it does not produce.

Influence of Cerebral Symptoms on Prognosis in Pneumonia.—The total number of cases of lobar and primary broncho-pneumonia studied was 120, with a mortality of 26, or 21.6 per cent. Nineteen, or 16 per cent of the children, pre-

sented early cerebral symptoms, with two deaths, giving a mortality rate of 10 per cent, and of these only five demonstrated tetany. Six patients suffered from late cerebral symptoms with four deaths, or a mortality rate of 66 per cent; of these four fatal cases three had pneumococcal meningitis. It is thus seen, first, that late cerebral symptoms are of much more serious import than early cerebral symptoms; second, that the mortality rate in cases with early cerebral symptoms is decidedly lower than that in the disease in children generally; and, third, that tetany could only be cited as a cause of the early cerebral manifestations in slightly over 26 per cent.—Glasgow Medical Journal.

Tachycardia and Intermittent Heart.—

In tachycardia whether proceeding from exophthalmic goiter or from other causes, or in intermittent heart arising from the excessive use of tea, coffee, or alcohol, Cactina Pillets will be found of exceptional value. They afford a safe and reliable means of overcoming excitability and irregularity of the heart's action. One or two Pillets every two or three hours will exert the desired effect by improving the nutrition and tone of the cardiac muscle.

Alcoholic Mania.—In treating the overstimulation of the cerebral centers by the excessive use of alcoholic beverages, Peacock's Bromides invariably exert a highly satisfactory sedative action. When the mania is active, doses of one to two tablespoonfuls may be given every hour or two with every confidence that the desired quieting effect will be produced, without the slightest danger of irritation of the gastric mucosa.

Thromboplastin Solution (Armour) is a specific hemostatic and acts promptly.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

Sleeplessness. — Peacocks' Bromides bring about sleep in a natural manner, that is, by producing a physiologic cerebral anemia. This well-known prepara-

tion is safe as well as effective and the administration of two to four teaspoonfuls an hour or two before going to bed will produce a sound, restful sleep, from which a patient will awaken, refreshed, rested and entirely free from the depression and ill effects so common to other hypnotics. Peacock's Bromides do not disturb the stomach nor induce a habit.

Artificial Lemon Juice.—Huerre gives the analysis of lemon juice as follows: Citric acid, 7.50 c. c.; malic acid, 0.50; saccharose, 0.45; invert sugar, 2.00; potassium citrate, 1.00; calcium citrate, 1.00. In addition there are traces of iron and phosphorus. Water, of course, to make 100 parts. If a synthetic lemon juice cannot be substituted for the natural product it must be because something akin to vitamine is present in the latter.—*La Presse Medicale*.

Glykeron and Glyco-Heroin (Smith) are synonymous appellations, and are now known as such to all dispensing pharmacists.

These names may now be used interchangeably by the physician when prescribing what was originally known only as Glyco-Heroin (Smith).

Glykeron is the more distinctive appellation and affords the physician a greater measure of protection against confusion on the part of the dispensing pharmacist when this preparation is prescribed for cough, bronchitis, pneumonia, phthisis, whooping-cough and kindred affections of the respiratory system.

Primary Sarcoma of Prostate.—Nicholson and Hainworth (*British Medical Journal*) describe a case of primary sarcoma of the prostate in a boy three and one-half years of age. He had had difficulty and pain on urination for seven weeks and it was necessary to cauterize him on frequent occasions. At operation it was found that the prostatic urethra was occupied by a tumor the size of a golf ball. The tumor was shelled out easily. It proved to be sarcoma. There was recurrence, however, with a fatal outcome.

Reduction of Paraphimosis.—Browdy, in the *London Lancet*, says that the simple means of puncturing the oedematous tissue, and so draining the waterlogged tissue. The skin is sterilized in the usual way or by painting with iodine; a few

stabs are made in the swollen tissue with a needle sterilized by passing through the flame of a spirit lamp or bunsen burner. Gentle pressure is made and the oedematous fluid will ooze from the punctures. The prepuce can then be easily drawn over the shrunken tissues. He has never had any complications following, but the precaution must be taken to give the patient some antiseptic lotion to wash out the preputial sac.

The Pandemic in Macedonia in the Spring of 1918.—That other territories were attacked as early as Spain appears to be shown by an account of the disease in the French Macedonian army in May-June of that year. This outbreak was at first confused with pappataci fever, but was soon identified with influenza when pulmonary complications set in. It is now fairly certain that the same affection appeared in Spain, Italy, and Macedonia at about the same time, but that for some unknown reason Spain became the chief distributing point.—*Office International d'Hygiene Publique*.

Cerebro-spinal Meningitis and the War.—The year 1915 seems to have been a record one for this affection in France and England. In the one of war activities in France the number of cases was 1073 and in England the incidence was 2566. In 1916 there was a notable falling off in both countries, which was maintained in France, although in England a high morbidity occurred in 1917. Less than half the English cases occurred in soldiers.—*Pathologia*.

Dysmenorrhea—Menstrual pain, when nervous in origin, or due to reflex spasmodic conditions, can often be promptly relieved by full doses of Peacock's Bromides when other measures prove of little or no avail. After one or two doses, the patient will fall to sleep and awaken in a few hours with the spasmodic condition completely relieved, the natural flow established, and the pain entirely gone.

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Dose: One or two pills at bedtime, or one at midday and another on retiring. Evacuation usually occurs eight to ten hours later.

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DETROIT

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The next annual meeting of the North Carolina Medical Society will be held in Charlotte, N. C., on the third Tuesday of next April.

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The next annual meeting of the Tri-State Medical Association will be held in Winston-Salem, N. C., on the third Wednesday of next February, 1920

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No. 3

RENAL INFECTION.*

By Dr. W. M. Copredge, Durham, N. C.

The large number of renal infections which are insidious in onset and often recognized so late as to cause surgical procedures to be hazardous, it was thought to be fitting to select this subject for discussion. Since to general medical men this question is usually presented in the form of a diagnostic problem, we shall consider the etiology rather briefly and attempt to follow the methods of diagnosis more in detail.

When we speak of the etiology of renal infection we are prone to consider first of all the bacteriology of the condition. But there are also some very highly important predisposing factors which should be first considered. These are (1) retention and (2) chronic nephritis. Retention either in the urethra or ureter, if prolonged, has the well known effect of lowering the resistance of the kidney or kidneys, depending on whether the obstruction is urethral or ureteral. The kidney of chronic nephritis is very much more often infected than the normal organ.

In dealing with the problem of retention urethral, in origin, the symptoms are usually evident and treatment of the stricture or removal of the enlarged prostate will usually relieve the condition. But the question of ureteral stricture or spasm, whichever it may be, is very much more difficult of diagnosis. A small stricture, by no means entirely closing the ureter, may by constant slight retention seriously damage the kidney of that side, and ultimately lead to a bacterial invasion. This subject of ureteral stricture was very much discussed recently in Atlantic City by Hunner of Baltimore, Young of Baltimore, and Brassch of Rochester, and Folsom of Texas. Hunner showed a large number of radiographs of ureteral stricture, showing that the condition is much more common than is commonly thought. Folsom of Texas disputes Hunner's results, saying that most of Hunner's cases were spasms of the ureter rather than real stricture, but however this may be, the problem of ureteral stricture is a very important one and

can be diagnosed definitely only by pyelography. In ureteral and urethral retention we find our most important predisposing causes of Renal Infection.

The Bacteriology is a large subject. In this discussion we will pass lightly over tuberculosis of the kidney. It of course is the most frequently met with, but its predisposing causes are slightly different. Lowered resistance of the patient and tuberculosis elsewhere, usually the lungs; are the causes in nearly every case. The diagnosis of the condition is essentially the same as that of the other infections to be discussed later.

The colon bacillus is the next most frequently encountered organism in renal infection. The frequency of colon bacillus infections in the pregnant woman is an outstanding fact, the predisposing factors being of course lowered resistance in the kidney, due to overwork and the stasis in the intestines usually associated with pregnancy.

The staphylococcus albus and aureus are the causative organisms in most cases of renal infection where urinary retention is the predisposing element. The person with urinary stasis very often develops a pyelitis or septic nephritis during an attack of tonsilitis. Any simple infection by staphylococci anywhere may lead to a renal infection if this organ is lowered in resistance by even very slight urinary retention. There is a large number of other organisms which are occasionally met with in cases of renal infection, but the above organisms are in such great majority that a discussion of the long list occasionally encountered will not be necessary, especially since the problem of diagnosis is the same in all cases.

The symptoms and signs are well known—septic temperature, increased pulse rate, very often chills, but perhaps not so frequently as is expected. Very mild cases may show very few or no constitutional symptoms. The pathology of the subject differs with the location of the infection, whether it be in the pelvis of the ureter, in the form of a diffuse catarrhal or suppurative process, or whether it be in the kidney substance in the form of multiple diffuse abscesses or large solitary abscesses. The kidney substance may be invaded by one of several routes—but the blood stream in pyemia, through

*Read before the Sixth District Medical Society of North Carolina.

the lymphatics, by direct extension from surrounding infection in the renal bed. By far the majority of cases come from the extension of a pyelitis into the kidney. Infection up the ureter from a septic bladder is almost impossible except that occasionally the infection may travel by the ureteral lymphatics. Most cases of pyelitis or pyonephrosis which are supposed to have come from a cystitis, were in themselves primary, the cystitis having come secondarily from an unrecognized condition higher up in the renal tract.

It is the mild cases of pyelitis which so often lead to disastrous results. Such infection by blocking the ureter with inspissated pus leads to urinary retention and this retention to lowered renal resistance—thence to infection of the kidney substance.

The diagnosis is usually a laboratory proposition. The ordinary routine examination of a passed specimen of urine gives very little information outside of the presence of leucocytes. It will not tell from which kidney the leucocytes are coming or whether they are from the kidney at all. The diagnosis between cystitis and septic nephritis is not always an easy one, and most any surgeon present can recall cases from which he has taken a pyonephrotic kidney which had been treated for years for cystitis. Then again, if the diagnosis of cystitis is correct, is not this condition most often secondarily due to infection of the renal tract higher up?

Pus in the urine where no acute urethritis exists is an indication for cystoscopy. There may be some exceptions to this, but they are few, outside of children who under ten or twelve years of age should not be cystoscoped except in very well selected cases.

To attempt to study the bacteriology of the passed urine, or even that catheterized from the bladder, is an undertaking which is seldom fruitful. Bacteria of many varieties occur in normal catheterized urine, some of them pathogenic, others are questionable so. Then, too, the great danger of contamination at such a procedure is very hard to overcome. For accurate bacterial study the urine should be obtained by ureteral catheter directly from the ureter. In this procedure, both ureters being catheterized, we can collect uncontaminated specimens of the urine and at the same time obtain by use of indigo carmine or phenolsulphonphthalein, an index to the renal function. Phenolsulphonphthalein is generally recognized to be the more accurate, although B. A.

Thomas of Philadelphia persistently contends in favor of indigo carmine. Undoubtedly indigo carmine has some advantages in cystoscopic work.

The dangers attending the procedure of ureteral catheterization are slight. The flow of urine down the ureters tends to wash back any bacteria which may have been introduced by the catheter from the septic bladder. Pyelography is of the greatest value in the cases of obscure infection. The differential diagnosis between true infection of the kidney (pyonephrosis) and pyelitis may be arrived at by this method. The use of sodium Bromide as an opaque agent to supplant the collargol and argintied solutions seems to be a step forward in pyelography. The use of a 25 per cent solution of sodium bromide for injecting the renal pelvis was advocated about one year ago. A recent report from the Hospital of the University of Minnesota supports the report of last year, but advocated the use of a 17.5 per cent solution because X-Ray plates at this strength were as useful as those made with higher percentages, and at the same time the danger of irritation is lessened by weaker solution. In the study of renal infections, Cabot claims that the functional kidney tests are much more valuable than pyelography.

For diagnosis of tuberculosis of the kidney, pyelography, renal function tests and careful physical examination must be combined with careful and repeated urinary examinations. It is probable that in many cases of tuberculosis of the kidney, the urine contains no tubercle bacilli. In case they are present in small numbers, the search for them in urine is very often, most often, futile. But in suspected cases, repeated urine examination should be resorted to.

Outside of a ureteral catheterized specimen, a 24-hour passed specimen is most useful. All the urine passed for 24 hours should be collected in a sterile container. In the laboratory it should first be carefully inspected for masses of pus and mucus. Small blood clots, etc., will often show the tubercle bacilli when the urine will not. The urine should be centrifugated and all sediment collected. Only high speed centrifugation will suffice. The sediment from the whole 24 hour specimen may then be treated by anti-formin or some agent to dissolve all the debris except the tubercle bacilli; films from this material may then be stained for the organism.

The guinea pig inoculation of the sedi-

ment from a 24 hour specimen will often be successful. There are, however, some breeds of pigs which show a great immunity to tubercle infection. We have in the polyclinic laboratories injected several pigs with a fair amount of known tuberculous sputum without any apparent effect upon the animal. It has been shown, however, that a short exposure of the guinea pig to the action of the X-Rays will greatly increase his susceptibility to tubercle infection. For this reason every pig should be exposed for a short time, —say three minutes, at ten or twelve inches from the X-Ray before inoculation with the suspected material. If the animal dies within one month, an autopsy is done and sections made from his spleen lymph nodes or other organs. Tuberculous lesions may be found.

The treatment first of pyelitis should be instituted early. The affected pelvis having been decidedly ureteral, catheterization and if possible the type of infection having been found, the patient should be put at absolute rest. Large amounts of water are indicated and a good general diet, usually free from salts. Salol or urotropin are given by mouth by most authorities, but the balsamics may also be used. Instillations of protargol, 1-5 per cent solution into the pelvis have been very successful. When there is a secondary cystitis it should also be vigorously treated. Cabot advocates the use of the indwelling catheter in these cases. Whenever retention is suspected in the ureter, an indwelling ureteral catheter will reduce the retention and predispose to a favorable recovery.

In pyonephrosis sympathetic treatment is indicated and surgical treatment early usually gives the best results. The use of autogenous vaccine in chronic pyelitis and pyonephrosis have been successful in a fair proportion of cases. Their use should be resorted to and combined with the other treatments.

Drainage of an infected renal pelvis is the keynote in the treatment. Without proper drainage the danger of pyonephrosis is greatly increased. If all cases were properly drained, infection of the kidney substance would be undoubtedly immensely lessened.

The purpose of this paper has been this, —a plea for more careful cases showing pus in the urine. So many unsuitable specimens of urine are received in a laboratory with requests for culture or examination for tuberculosis that it was deemed well worth while to warn the physicians

not to place too much confidence in laboratory reports, providing the specimen is not suitable. A negative report for tuberculosis on a three ounce specimen of urine is utterly worthless. A twenty-four hour specimen is necessary and most often has to be repeated.

Early exhaustive study of these cases will greatly decrease the number of surgical kidneys. The important factor of urinary retention will be disclosed if drainage of an inflamed ureter may be instituted and the damage to the infected kidney greatly lessened. Spread of the inflammation by sympathetic irritation of the opposite kidney may be overcome.

Specimens obtained by cystoscopy and ureteral catheterization will be much more valuable because it has been emphasized that ordinary urinary examinations is worth very little in the diagnosis of the type and site of upper urinary infections. With ureteral catheterized specimens of each kidney, the individual renal function may be accurately determined and the laboratory may be placed in a position to serve the profession more generously.

Cerebro-spinal Meningitis and the War.

—The year 1915 seems to have been a record one for this affection in France and England. In the one of war activities in France the number of cases was 1073 and in England the incidence was 2566. In 1916 there was a notable falling off in both countries, which was maintained in France, although in England a high morbidity occurred in 1917. Less than half the English cases occurred in soldiers.—Patholgia.

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MY EXPERIENCE WITH DR. GOLDBERGER'S THEORY OF THE CAUSE OF PELLAGRA.

By K. G. Averitt, M. D., Cedar Creek, N. C.

When my esteemed Friend, the Chairman of the Section of Medicine, asked me for a paper for his Section, he said I could write on any subject I preferred, but he would like to have a paper on Pellagra. This, until very recently, has been a difficult subject to discuss, because we did not know its etiology. We know its etiology now, and I was tempted to take some other subject, but it occurred to me that experience with Goldberger's theory might be of interest to some.

The fact that the disease is very common in countries where maize is the chief article of diet, caused many to think it was the agent responsible for the trouble, but those who held this belief, could not tell whether it was caused by some germ or mould in the grain, or whether the maize was an insufficient diet. Some thought it was due to soil pollution, some that it was caused by the sun's rays, some that a nematode found in water was the agency, some that cotton seed oil and hook worms were to blame, and then came the brilliant work of Sambon in trying to prove that it was an infectious disease, and that the intermediate host was an insect. Reasoning along this line, the Chairman of this Section at one time thought the abominable bed bug might be the carrier, and did much work investigating the habits of this pest. Indeed, at the time, I was almost sure he was going to prove this pest to be the cause, but like others he failed to make out a case, and the work was fruitless. Of all these theories, the maize theory was the only one that had an element of truth in it, and this, as we shall see further on in this article, was not altogether to blame.

It remained for an American, Dr. Goldberger, to discover a universal cause. Dr. Goldberger believes, and produces almost indisputable proof, that the disease is caused by an unbalanced diet, or in other words a diet lacking the vitamins necessary for the proper nutrition of the body. When the doctor announced his theory, I, like many others, doubted the correctness of his observation, but increasing experience with the disease has convinced me that he is right.

The theory satisfactorily explains many

questions connected with the disease that no other theory has, or can answer. For instance, its close association with maize could not be explained, but now we can see that where maize was thought to be the cause, the people were living almost altogether on corn products, and hence on a very one sided diet. It explains why more cases are found along streams of water, because, go where you may, it is readily seen that in the early settlement of the country the agricultural classes settled along streams in order to have easy access to water for their stock, and because the streams furnished drainage for their farms, and afforded a means of livelihood by fishing. As a result of such environment, you find more people of a shiftless and lazy disposition living along streams, and a people who easily fall into the habit of eating the cheapest and most easily procured food. It explains why you have more cases in the suburbs of towns, because the needy and undernourished inhabit the suburbs, while the wealthier classes live up town. It explains the prevalence of the disease in mill villages, because the women and children in these places practically all work in the factory, and have very little time to attend to a cow, or to procure and properly prepare the right kind of food, and therefore they buy and eat articles of diet that have very little nourishment in them. It explains why more women than men have the disease, because they eat less and drink less of the articles of diet necessary for the proper nourishment of the body than men. They are light meat eaters, very few of them like eggs, many of them will not drink milk, and nearly all of them stint their diet in trying to develop a beautiful face or figure. It explains why the disease is common in chronic alcoholics, because such patients keep full of alcohol, and have very little appetite for anything else.

At first glance, the theory may not seem plausible in all cases, but when a patient consults you, ply that patient with questions after the manner of a lawyer on cross examination, and you will find some freak of diet.

Just what elements are lacking in the food is difficult to say, but the elements necessary for maintaining a good nervous equilibrium between the various organs of the body are probably the most important.

The best test of a theory is to put it into execution, and see if it produces results. Before Dr. Goldberger announced

*Read before the North Carolina Medical Society at Pinehurst, N. C.

his theory, I told my patients to cut out corn products and sweet articles, and to eat everything else they could think of, or could get their hands on, and then gave them arsenic. I can look back over my work now, and see that those who obeyed my instructions as to diet, got well in spite of the arsenic, and those who continued on the same diet, soon landed in that country from which no traveler ever returns. I was not very far wrong with my diet, but I made the mistake in attributing my results to the arsenic. Since the announcement of the theory, I have given very few drugs, and depended more and more upon diet, and my results have been better. The patients have improved equally as well without the arsenic as with it, and I have not had so much trouble with eyes and burning feet.

The only cases that have not improved or recovered, have been chronic cases with a badly damaged nervous system, and cases that persisted in eating the same diet they were eating before they came for treatment.

To sum up, I would say that the theory is correct, and that, if begun in time, it will cure nearly all cases, and will prevent all. Its power to prevent this disease is only equalled by the power of vaccination to prevent small pox, and should receive the same attention at the hands of State Boards of Health, and those whose duty is to preach preventive medicine.

Treatment of Gunshot Wounds of Bladder.—Kidd (British Medical Journal) says that the following methods are used in gunshot injuries of the bladder: The intermittent use of the catheter. 2. Immediate suprapubic cystotomy. 3. Regular periodical expression of the urine. 4. The use of the tied in catheter. Of these the two first do not fulfill the conditions and should be abandoned. The author has employed the fourth method with the greatest success when certain very necessary precautions have been observed, but he is inclined to believe that the third method, when properly carried out, may prove to be the best. The doctor's plan of using the tied in catheter is to irrigate the anterior urethra thoroughly with a quart of warm water containing two drams of the oxycyanide of mercury and then to pass a sterile soft rubber catheter of No. 9 or No. 10 English scale. The urine is collected in a bottle. The catheter should be changed every fourth day, the urethra being irrigated at each change.

THE USE OF PROPRIETARY FOODS IN INFANT FEEDING.*

By Dr. B. V. Brooks, Durham, N. C.

A suitable infant food is one which produces uniform development and which causes no disturbance of digestion. Mother's milk is the ideal infant food and is the only food in use that approaches the ideal.

When it becomes necessary for any reason to put a baby on a modified food the first question that arises is "what shall the food be." There are many determining factors in making this decision. The food must be, first, one which will promote growth and development; it must be, second, one which will produce no digestive disturbance; it must be third, adapted to the intelligence of the patient, that is, its method of preparation must be sufficiently simple so that it offers no special difficulties to the mother or nurse; it must be, fourth, an economical and easily obtained food.

In our choice of foods we have available for use either one of the various proprietary foods or cow's milk.

There are three types of proprietary food, the first of which is represented in condensed milk, the second in the malted foods, as Mellin's food and malted milk, the third in which there is considerable starch in addition to the soluble carbohydrates, as Nestle's food and Eskay's food. Each of these foods has a very high carbohydrate content.

In the preparation of any infant food it is well to remember that the food elements most likely to produce digestive disturbance are the fats and the carbohydrates. An excess of fats in the food is productive of much trouble but it is not so frequently seen as is an upset from sugar. This may be due to the fact that changes in the sugar are more easily made and therefore more frequently made. To whatever reason it may be attributed it is certain that it is the factor that produces the most frequent digestive disturbance in infants.

Carbohydrates are only slightly acted upon in the stomach and pass quickly into the intestines where they are acted upon by the various digestive ferments. A portion of the carbohydrate then is absorbed and assimilated and a portion of it is fermented in the intestines. This fermentation of the normal excess of carbohydrate

*Read before the Sixth District Medical Society of North Carolina.

in the food keeps the reaction of the intestinal canal acid and thus aids in a more complete digestion of the proteid. If the carbohydrate then is fed in excess of the normal amount there is increase of the acidity of the intestinal contents. This increased acid acts as an irritant to the intestinal mucosa and results in an increase of peristalsis, removing the irritant from the intestine. This not only results in loss of carbohydrate to the absorption but the increased peristalsis carries out large amount of fat and proteid and salts which would otherwise be retained and absorbed.

This excessive fermentation also causes formation of gas, abdominal distention and extending backward may carry irritating acid products into the stomach and cause vomiting. The limit of carbohydrate tolerance is variable, some babies digesting more than others, but in general it is not advisable to give more than 7 per cent of sugar, and in most cases 6 per cent will be the limit. In some cases an extreme degree of intolerance is found, or it may be some particular form of carbohydrate is very poorly tolerated.

Let us consider the various types of proprietary foods mentioned, considering first condensed milk, the preparation most frequently used in artificial feeding. The formula of condensed milk is F 9.6, c 54.94, p. 8.01. It will be seen at once that this is not only very high in the sugar percentage, but the sugar is relatively out of proportion to the other elements. Suppose it were desired to give the baby a 4 per cent fat. In this case it would be necessary to give 22.88 per cent sugar, a food obviously excessive in carbohydrate. If it were desired to give the baby only 6 per cent sugar then we would have a formula with only 1.04 per cent fat, .87 proteids, a formula suited only in exceptional cases for a very young infant. Any preparation of condensed milk (sweetened) then would be either excessive in sugar content or else too low for the use of a young and developing baby.

The second type of foods, the malted foods, as represented by Mellin's food and Malted Milk will show the same objections. For instance the formula of Mellin's food is F .16, c 79.57, P. 10.35. This food is obviously of such an unbalanced proportion that to be used alone for any extended period of feeding and except in the most obvious case of fat intolerance would be impractical. The proportion of fat could never be brought up to the point

that it would satisfy the requirements of a feeding baby.

Malted Milk shows a formula D 8.78, c 67.95, P 16.35. In order to feed a formula of fat 4 per cent with malted milk it would be necessary to give 31.02 per cent sugar, again obviously excessive. If the sugar is brought to a point of tolerance, e. g., 6 or 7 per cent the fat content would be .87, a food which could never promise any hope of good development in the infant. Nestle's and Eskay's food show the same objectional features.

Suppose we take the formula directed on the package of some of these foods, take condensed milk for example. The directions are 4 teaspoonfuls in 5 ounces of water for infant 3 to 5 months of age. This would give a formula F .96, c 5.49, P .80 (this is only reckoning 4 teaspoons at 1-2 oz.)

If Malted Milk were used the directions would be 3 tablespoonfuls to 5 oz. of water, this gives a formula, 1.75, 13.59, 3.27.

Mellin's Food has seen the error of its methods and has ceased to advise its use alone, but advises its use in combination with whole milk.

It may be readily seen that infant foods prepared from these proprietary foods are unbalanced diets leading to digestive disturbances, to improper development, to rickets and scurvy. The proportions too are constant and cannot be altered so long as the infant is fed upon these foods alone.

These foods, it must be admitted have certain advantages. They are easily prepared, they may be freshly prepared for each feeding, but it must be remembered that they contain only certain food elements, viz., fats, carbohydrates, proteids and mineral matters, and that they contain nothing of any food value which may not be obtained and put into a modified cow's milk in any form and in any quantity desired, and that they have, therefore, no specific value in infant feeding as compared with other foods.

From the study of these foods the following conclusions are arrived at, first, all of them contain sugar in excessive proportions and thus tend to produce fermentation, excessive acidity of the intestinal tract and diarrhea, which causes not only a loss of sugar but also by increased peristalsis of the intestines a loss of the fats and proteids; second these preparations are constant and can never be altered in such a way that they make a suitable food for any continued period of feeding; third, on account of their unbalanced

proportions they tend to unequal development, and therefore poor development, to rickets and scurvy; fourth, that cow's milk offers practically all the advantages of the proprietary foods with none of their disadvantages and is therefore the food of choice when it becomes necessary to put a baby on artificial feeding.

HYSTERIA IN ARMIES: METHODS OF CURE.

By Dr. Tom A. Williams, Washington, D. C.

The whole treatment of hysterical manifestation depends upon one principle, the replacement of the patient's morbid mental attitude by a normal one. It is a re-conditioning, a substitution, a re-education to which the patient has to be persuaded.

The means of persuasion are innumerable. The most successful in the hands of one therapist are not necessarily those which should be employed by another. The choice depends far less upon the nature of the hysterical symptom, or even upon the nature of the patient's make-up, than upon the temperament of the therapist himself. Some men are most successful when they employ methods which are in reality pure suggestion; others are more successful if they use methods which make the patients suffer. Others again cure more cases when they are permitted to elaborate a systematized re-education of the patient.

Suggestion.—The methods which are scarcely more than direct affirmation and suggestion are only of utility during the whirl of the dressing station at the front, at a time when the man's belief that he is justified in reporting sick is not at all firm. The diagnosis can be made swiftly and easily. To restore the patient's military capacity it suffices to assure him confidently that his trouble has disappeared and that there is no reason for its return.

Torpillage.—The removal of hysterical symptoms by the infliction of suffering is applicable to perseverators and simulators rather than to the general hystericals. It is a method most readily employed by those physicians who have not the patience and the spirit of organization required for more systematic treatment. It is, of course, a very rapid method, saving a great deal of time for the doctor, and providing a great economy of man power, in that a patient treated in this way can be restored to the service in less than a month, whereas a patient in whom the

more moderate methods of influence and re-education are employed requires several months to become fit for service.

The severe and painful methods of treatment, however, are greatly restricted in utility unless they are employed throughout the army, unless the assurance that they will be employed is known to the soldiers, and unless their use is sustained by public opinion. When the chance of evading this treatment exists either because the patients know that the doctor dare not push it, or on account of fear of interference by political appeal, the treatment loses its authority and becomes a very painful ordeal for the doctor using it. Besides not every man has the tenacity, the courage and the skill required for its utilization. Mere relentlessness does not suffice. The doctor must know when to cease the painful stimulation and invoke the patient's own will in the removal of his disability for intemperate zeal and bungling brutality inevitably produce a spirit of vindictiveness in those subjected to the treatment which has a detrimental effect upon the neurological services in general.

Re-Education.—Thus, unless in thoroughly successful hands torpillage should never be attempted. Accordingly, it is necessary to have recourse to the method of gradual re-education. The principle utilized to effect the metamorphosis of the patient's mental attitude by this procedure is that of the building up of hopeful expectancy by giving of examples of cures and by other means calculated to create an atmosphere of confidence. The subject is fully gone into in my forthcoming book upon disorders of the nervous system in warfare.

Antimony Tartrate in Bilharzios and Tachycardia.—Christopherson (British Medical Journal), says that the tachycardia reputed to follow the therapeutic injection of tartar emetic in bilharziosis is not necessarily due to the drug. The doctor suggests that in many cases tachycardia would be found before treatment if looked for and offers, as an explanation for the rapid heart, the simultaneous infection of the subjects of bilharziosis with one or more of a large variety of intestinal protozoa and parasites. He therefore urges that the feces of all patients with bilharziosis be examined for such other parasites while the use of antimony is still on trial, so that this valuable drug may not be unjustly blamed for effects which it does not produce.

THE RECOGNITION AND TREATMENT OF CARDIO-VASCULAR-RENAL DISEASES IN COUNTRY PRACTICE.*

By T. C. Johnson, Lumberton, N. C.

I wish to apologize in the beginning for treating so important a subject in such an unscientific disconnected way but realizing the necessity of an early recognition of this trouble if one's patients are to be benefited or their lives prolonged and seeing almost daily in my practice men and women in middle life suffering from this trouble emphasizes the necessity of calling the attention of the medical profession to this disease, especially those of us that practice in small towns or villages, where scientific methods of diagnosis and treatment are noticeable by their absence. It is too late to give any great amount of relief if this condition is not recognized until the late stages, while an early recognition often prolongs useful lives several years. For convenience rather than correct classification I will enumerate briefly some of the more frequent early symptoms; observation will show that it is impossible to always give the early symptoms with any degree of accuracy as the symptoms vary greatly in their initial appearance in different individuals.

1. Cardiac Symptoms.—Of the early Cardiac Symptoms shortness of breath, pulmonary edema, anginoid pains, edema of the lower extremities and hypertrophy of the heart are the more common. If care is exercised in tracing the history of the patient it will be surprising to note the number of patients suffering from shortness of breath as the first symptom. Pulmonary Edema usually a late symptom occasionally occurs early. Anginoid pain on exertion occurs early in a rather large percentage of patients likewise palpitation. Edema of the legs usually a late symptom occasionally early, I have in mind a patient treated by me in whom it was first. Hypertrophy of the heart and hypertension are nearly always present if there is kidney involvement.

2. Renal Symptoms.—Polyuria, Nocturia or frequency of urination albumen and casts and Oliguria are the more frequent early renal symptoms. Polyuria with the urine of low specific gravity from 1010 to 1016 is an especially early symptom in this disease. Quite frequently al-

bumen is found only in traces and then not until several examinations have been made at different intervals extending over a period of several days. Often albumen and casts are the first evidence of the renal condition. Oliguria is usually a late symptom but at rare intervals it is the first.

3. Cerebral Symptoms.—Dizziness or vertigo, a feeling of fullness in the head, pain in the occiput, tinnitus, and a peculiar headache coming on in the early morning hours usually between the hours of two and four a. m. and passing off after breakfast or at latest at nine or ten o'clock in the morning. This is the "typical" headache described by Dr. T. C. Janeway 1, of New York. I have a patient at present that has suffered from this type of headache for the past several months. Occasionally it has been so severe that patient cannot sit up until after eating breakfast or at least taking a cup of coffee. Dizziness or vertigo is a very common early Cerebral Symptom, and the patients in a large number of instances will consult the family physician and still want to do their own prescribing telling him that they have a peculiar feeling in their head and feel sure they need a dose of calomel.

4. Vascular Symptoms.—Of the vascular changes high blood-pressure of hypertension and arteriosclerosis, purpuric spots and anemia are the more common symptoms. Hypertension and arteriosclerosis occur comparatively early and at this point it is well to add that we should be especially careful in our pressure readings, not depending on the systolic pressure alone by systolic, diastolic, pulse pressure and computing the percentage of heart load. W. J. Stone 2, states that the diastolic is a better index of cardiac and renal conditions than the systolic. Warfield 3, also believes that the diastolic readings are the more important. He states a high diastolic reading means more work for the heart and leads to hypertrophy of the left ventricle a high systolic pressure is invariably associated with a high diastolic pressure and in a failing heart the systolic pressure approaches the diastolic until the pulse pressure becomes nil. He further states that it is conceded that high diastolic, high systolic, and increased pulse pressure indicates chronic interstitial changes in the kidneys in the face of normal urinary findings. Purpuric spots usually occur late but was the first symptom in one of my patients. Anemia usually a late

*Read before the North Carolina Medical Society at Pinehurst.

symptom but sometimes found early.

5. General Symptoms.—Of the early general symptoms fatigue or exhaustion, on slight muscular exertion, mental depression, neuralgic or muscular pains, anorexia, epistaxis, haemoptysis, and retinal hemorrhages occur early with more or less regularity in a fairly large percentage of patients of this type. Gastro-intestinal disturbances are usually late symptoms but sometimes occur early. Cough is usually late unless preceding a sudden attack of dyspnoea occurring as an early symptom.

When any of the above symptoms occurring in patients between the ages of 40 and 60 (as the greater number of patients suffering from Cardio-Vascular-Renal Disease occur between these ages) are persistently present it is well to keep the patient under observation for days or weeks, even though kidney, heart, and pressure readings are negative, for often after repeated examinations only can a satisfactory diagnosis be made. Ophthalmoscopic examinations of the eyes often show retinal changes due to pathological conditions in the kidneys that has been unsuspected by the ordinary urinalysis.

Treatment.—For convenience I divide as follows: rest, search for focal infections, diet, drugs, and confidence of our patients. First of paramount importance in the treatment of Cardio-Vascular-Renal conditions is rest, and if heart compensation is threatened rest in bed. Second, a thorough painstaking search should be made for any focal points of infection that might have a bearing on the condition, for example, careful examination of the teeth, and if found to be decayed or if Pyorrhea be present have the necessary dental repair made or the teeth extracted as occasion demands. We should make a rigid examination of the tonsils, nasal, sinuses, get a full history of any discharges from the ear, examine for chronic appendicitis, and if any suspicious points are found, have them remedied. Third, Diet. A proper dieting of Cardio-Vascular-Renal patients is of the utmost importance, especially where there is any Renal involvement. We have all doubtless realized the difficulty in properly dieting Cardio-Renal conditions for if we adhere to a strict diet best suiting Renal Pathology and Cardiac Pathological conditions are present we are likely to cause serious consequences to the heart muscle. When the Renal symptoms predominate in acute conditions or acute exacerbations of a chronic condition

a good rule to work by is to starve the patient if the heart can stand it. We can often give our patient great relief by giving them a milk diet by the Karell method (32 ounces of milk given in four feedings of eight ounces each during the twenty-four hours, prohibiting other food and water.) This is especially advisable if the patient is waterlogged, that is suffering from edema of the lungs or lower extremities. In the chronic conditions I am heartily in accord with Dr. F. C. Shattuck 4, of Boston, Mass., in that "A varied is more likely than a monotonous diet to promote the manufacture of good blood and thus to promote good nutrition of the body in general and the Myocardium in particular." Unless the urgency is great it is best not to unnecessarily starve the patient but rather give a carefully selected nutritious diet containing a small amount of proteids at the same time remembering that it is not the proteids themselves but an excess of proteids that cause trouble in chronic Cardio-Renal conditions. Fresh green vegetables and fruits in their season are nearly always permissible in the chronic forms. The white meats, fish, butter and milk may be given. If the tissue waste is great red meats in small amounts may be given at the noon day meal, animal broths however should be prohibited as they contain little of nutritive value only the essences. The condiments should be prohibited as doing without these necessities no great hardship on our patients. We will do well to remember that a qualitative rather than a quantitative diet should be given, and remembering that the amount of albumen is no criterion as to the extent of dietary restrictions but rather the quantitative output of urine.

Fourth, Drugs. Of the drugs used in the Cardio-Vascular-Renal condition with greatest success are digitalis, sodium nitrate, nitro-glycerine, salines, diuretin, and Theosin. Digitalis is the most useful we have, especially useful in failing compensation and edema of the lungs. When necessary to prescribe digitalis a good standardized preparation should be used. The digipuratum tablets are convenient to administer at the same time standardized and free from fats so often disagreeing with the stomach or an infusion made from the leave of known strength in my opinion are the most reliable preparations of this drug that can be given. Digitalis is given advantageously in a series of twelve doses, two the first day, four the second and third, and

two the fourth. I am indebted to Dr. E. J. Wood of Wilmington, N. C., for calling my attention to this method, which I have used in a number of cases with very gratifying results. Salines are always indicated in waterlogging and where it is necessary to relieve the kidneys of part of their work. Of the Diuretics, Diuritin has proven an especially valuable remedy in my hands given in seven and one-half grain doses in four to six hour intervals for thirty-six hours. It is not well to give longer than thirty-six hours without an intermission as it occasionally causes complete kidney blocking. Theosin in three grain doses given in warm water three times daily often proves to be a valuable Diuretic. Fifth. The confidence of our patients should be obtained by explaining along broad clear cut lines why it is necessary to have their continuous co-operation rather than spasmodic efforts on their part to get the best results for their cure or comfort.

1. Dr. T. C. Janeway, Archives of internal Medicine, Vol. 12, Page 755-798.

2. W. J. Stone, Jour. Am. Med. Ass'n. 1913, chapter 41, page 1256.

3. Warfield, New York Med. Jour. 1915. Chapter 7, page 509.

4. Dr. F. C. Shattuck, Jour. Am. Med. Ass'n. January 6, 1916.

Features of the Recent Pandemic.—

Gouget lays stress on some phenomena studied at the height of the pandemic. One of these was total absence of any discharge from the nose, along with extreme rarity of any sinus or ear location. By contrast anginas were common. The alleged polymorphism he scouts. All of the cases seen were thoracic, whatever chance affections might have coexisted. Hemorrhages were a feature, some of rare character, as intramuscular hematoma. At autopsy edema of the lungs was never absent. Fibrinous exudate was very slight in degree, and the pneumococcus could be excupated as a cause. The disease was very severe in those with old lung affections—simple chronic bronchitis, emphysema, thoracic deformity, cardiopathies and tuberculosis in full evolution. It was objected that the author dealt essentially with hospital cases and that his description did not hold good for healthy extrahospital patients. In the latter class the condition was apt to be like a general infection from which even pulmonary lesions might be absent.—La

SOME EXPERIENCES AND OBSERVATIONS IN THE STUDY OF GASED CASES FROM OVERSEAS.

By J. H. Hiden of Pungoteague, Va.

Since the introduction of irritating and poisonous gases in the processes of modern warfare, physicians have attempted to classify the various kinds of gases used, and also the effects of these upon the unfortunate victims. They give in their classification: (a) those that have a local, irritating effect upon the respiratory tract; (b) those that affect the eyes and nasal, mucus membrane; (c) those that depress the nervous system, producing extreme nausea and vomiting; (d) those that produce profound toxic effects; (e) those that are extremely caustic in their action. And so, in examining a patient who has been gassed, the physician would naturally ask himself: what sort of gas has been used in this case? An important question, but one which is not always easily answered. It may be said, however, from a practical standpoint this above classification is not so essentially important as it may appear at first sight; for these irritating gases of the chlorine and bromine type are so often immediately followed, in an engagement, with the more deadly forms of gases, such as phosgene, diphosgene, chloropicrin, and paralyzing gases, as compounds containing hydrocyanic acid, arsine and phosphine preparations, as well as the more caustic and distressing variety called "mustard gas." Moreover, in many engagements the gas projectiles that were fired by the Germans were filled with mixed gases, oftentimes several of the above varieties, especially the phosgene and diphosgene combined with some of the chlorine-type. This being the case, we can readily see that an accurate differentiation of the pathological changes in the lungs as the result of a specific gas employed in action is by no means an easy task; nor is it, as I have intimated, a clinical necessity. It is sufficient to know that the pathological changes in the patients organs are the result of the combined actions of a variety of irritating and toxic gases.

Now in discussing gassed cases we would naturally divide them into two phases: (1) those suffering from the acute effects; (2) those suffering from the chronic. In the acute form the suffering is often intense, and the action violent, especially so, with those respiratory irritants which were devised to put men im-

mediately out of action. In such cases, as I have intimated, we must bear in mind that these are so combined with the more deadly forms of gases that when we have the violent effects of the chlorine variety with sudden, frightful irritation of the whole respiratory tract, with spasm of the glottis, followed with inflammatory oedema, cyanosis, cardiac strain, convulsions, coma and threatened collapse, the more insidious action of the toxic variety closes the scene with an early death. Should the gassed sufferer survive this torture for four days, he usually lives only to pass through a long course of chronic troubles with various degrees of physical and nervous distress, and often resulting in a long period of despondency. In addition to this, in such cases in which the caustic effects of some of these gases have seriously damaged the capillaries of the lungs, the poor sufferer is placed in a most favorable condition to develop other lung troubles. This picture, of course, represents those who have been severely gassed. Often-times, however, the very violence and suddenness of an acute attack of the gassed patient furnishes a protection in itself from a more insidious form of the destructive processes. This is due to the protective action of the violent spasms of the upper respiratory tract in which the larger bronchial tubes quickly close, shutting off the entrance of the gases into the smaller tubes and capillaries, and thus, saving the patient.

Now it is well to note that we have all degrees of severity in gassed conditions, ranging from a slight local or toxic effect, respiratory or cutaneous irritation to the most violent local or toxic forms. And, of course, the chronic pathological changes which follow these gassed conditions will be more or less in proportion to the concentration of these gases used; the proportionate varieties of the more irritating forms, and the extent of the acute injuries when the patients were gassed. Thus an accurate, comprehensive knowledge of these chronic conditions involves a clear view of the acute forms also, as the primary cause of these latent pulmonary changes. And these pulmonary changes, especially, should engage our careful attention when we consider that in the casualty list of our soldiers, it is claimed, about fifty per cent have been gassed. In view of this it is needless to say that every general practitioner ought to familiarize himself with this subject, that he may whenever occasion arises, do his best to give relief to the noble boys

who have endured so much in the defense of our country.

When examining many of these gassed cases at the Lafayette House, New York city, (a temporary home for the sick and wounded officers from over-seas), I found that most of them were annoyed with a peculiar form of chronic bronchitis. This is generally bilateral, of various degrees of involvement in different lobes, tubes and capillaries of one or both lungs, with more or less destruction of the epithelial, cellular lining of these pulmonary tubes resulting in scar-tissue in these affected areas. And as scar-tissue generally contracts, we can easily see how the resulting fibrosis is sure to diminish the elasticity of certain pulmonary areas; and the normal capacity of the lungs for oxygenation of the blood. Indeed, it is claimed by the best pathologists that in many cases of severely gassed patients, upon autopsy, this pulmonary fibrosis has been often found so extensive as to resemble closely the condition of fibroid phthisis. And just here I wish to emphasize, though it may appear a sort of needless repetition, that these pathological lesions, due to the irritating and caustic gases, weaken the normal vitality of the pulmonary tissues and place the lungs in a most favorable condition for many of the various respiratory diseases, including, especially, attacks of relapsing bronchitis, influenza, pneumonia and tuberculosis.

Now in the examination of many of these gassed cases we find not only various phases of morbid conditions, but also various degrees and areas of involvement, pulmonary cardiac and nervous, according to the manner and severity in which this brutal work was accomplished. When the chlorine or bromine varieties were used, or their combinations with the phosgene or diphosgene varieties, we are apt to find the characteristic traces of their work on especially the respiratory tract, as I have before mentioned: namely, an obstinate chronic bronchitis, usually more or less bilateral, with spots which often show evidences of intense irritation and inflammation. On auscultation we often hear creaking and friction sounds from these areas, doubtless either about or intimately associated with spots of fibrosis, or some stage of development in their formation. This condition is therefore a very serious one, and the chances of a permanent recovery are often doubtful indeed. Moreover, their distressing symptoms are very persistent, and obstinate in yielding to treatment. They are

usually more annoying during the early hours of morning when spasms of coughing are very common, and expectorations of tough, tenacious mucus from the bronchial tubes are often accompanied with spells of nausea. This, accompanied with the symptoms of profound nervous strain and weakened conditions of the heart, with spells of tachycardia and threatened cyanosis, gives you a common picture of the poor gassed sufferer who has endured so much in the interest of his country, and for the protection of his loved ones.

Now in considering the above symptoms I wish to call a little closer attention to those of the heart. As I have just said, we often have evidences of heart strain, and a weakened condition in the cardiac muscular tissue. There are all degrees of this diminished cardiac power, ranging from a very slight disturbance to a marked dilatation of one ventricle or even both. These cases also give varying degrees of cardiac arrhythmia, spells of tachycardia, weak systolic sounds, followed oftentimes with evidences of embarrassed circulation even to the point of cyanosis in many cases especially upon occasions of sudden exertions. While in charge of many of these gassed patients from overseas, I was impressed with their complaints of the above distressing symptoms as occurring early in the morning upon rising from sleep. These symptoms were often alarming to these sufferers, and I found it necessary to give them some mild stimulant at such times to modify the disturbed action of the heart, and relieve them of their anxiety.

Now these pathological conditions of the heart have given the medical profession some new problems to solve, and as is usually the case with all new problems of this character, there are various opinions and speculations as to just what actually occurs, and also as to the successive morbid processes involved in these degenerative tissue changes. Some observers look at the mechanical conditions while others see little more than the toxic. It seems to me, however, that both factors should be well considered and each valued in giving a reasonable solution to the problem. Though a positive demonstration along this line, with our present state of knowledge, may appear hardly attainable, still, from a theoretical standpoint, a very plausible conclusion can be reached—a conclusion which not only harmonizes with the cardiac symptoms, but also with the degenerative changes of the cardiac muscular tissue. In the

mechanical side of the cardiac disorders we find, as I have already intimated, a most tremendous exertion of two or three days or more of continued action upon the right side of the heart in its effort to oxygenate the blood in the face of spasm of the glottis, extreme bronchial irritation, inflammation of the bronchial tubes and capillaries, followed with heavy, inflammatory exudation. This persistent strain on the right cardiac muscle can hardly be put too strongly when we realize the violence of these acute processes in the pulmonary areas, and the amount of work required by the heart to save the patient from complete cyanosis and collapse. Who can doubt, in view of these facts, that the heart muscle is brought to the point of extreme exhaustion? Added to this we have the other potent factor in these cardiac changes, namely, the toxic side of the problem. And in accounting for what appears a selective, toxic effect upon the cardiac muscular tissues it is generally conceded that this action is usually due in a large measure to the phosgene or diphasgene gas—so generally used by the Germans. Now this "selective action" can be explained in this way: when the blood absorbs the poisonous gas products from the respiratory tract, all this blood, as we all know, has to pass through the auricles and ventricles of the heart; and this toxic action is continued for days while the blood is continually absorbing hourly the decomposition products of the bronchial, epithelial cells, still more or less saturated with the toxins of the phosgene gases. It must also be remembered that under high blood-pressure, as we have in acute stages of gassed cases, this intimate relationship of the blood with the heart muscle is even intensified. Now add to this the state of cardiac fatigue, which has been referred to, and we have the explanation of the "selective toxic action" upon the heart from these poisons.

Again, another feature of many of these gassed cases is found in what we call "gas shock." This gives similar symptoms to "shell shock"—a form of psycho-neurosis, sometimes called neurasthenia for the lack of a better name. When well developed it is a most distressing condition indeed; bordering on the very verge of insanity. And in dealing with these patients we should remember that they should not be treated like hysterical patients, withdrawing from them all appearance of sympathy and even our presence; but they should be made to feel that they

have the full warmth of our sympathy and companionship, and they should be constantly made to believe that they are going to get well, and that life will be enjoyable in the years to come. Indeed, we should try to get them especially interested in some kind of outdoor sport or pleasure that will keep up their interest without drawing too heavily upon their vitality.

The General Treatment.—This should consist mostly in observing the ordinary hygienic principles of life; rest, abundance of sleep, good wholesome food, and a mild, temperate, climate with outdoor air, and moderate exercises. This fresh air treatment can hardly be too much emphasized when we consider the obstinate chronic bronchitis with pulmonary area diminution in many of these cases. It may be also added that there is no better way of resting and strengthening a crippled heart than in supplying the lungs with an atmosphere highly charged with oxygen.

The use of drugs in these cases should be given with care and caution, and when any stimulants are given to relieve the frequent attack of tachycardia, only mild remedies should be used, and then, only occasionally, as necessity may require. Every effort should be taken to prevent the patient from "catching cold," and he should be taught to avoid not only undue exposure to unfavorable weather, but also to avoid exposure to current, contagious diseases; remembering that these gassed cases are peculiarly susceptible to the invasion of respiratory diseases, as well as to repeated relapses of a bronchial nature.

Preoperative Demonstrations of Malignant Metastases.—Whiteford, in *The London Lancet*, mentions a case in which silent metastatic growths were demonstrated roentgenographically in the mediastinum in a patient with an otherwise easily operable cancer of the breast. The writer then emphasizes the fact that the thoracic cavity may be the site of early, silent metastases in nearly every form of malignant disease. These metastases can usually be demonstrated by means of radiography, and their discovery will save many a patient from utterly useless operation and will improve the recovery records of early radical operation. It should also be possible to demonstrate metastases in other regions than the thorax. The examination for such metastases should be made as a routine before operation is undertaken.

MULTIPLIED STUPIDITY.

By Howard Crutcher, M. D., Tularosa, New Mexico.

Several years ago (I have forgotten in which publication), I presented a paper in which I deplored the inconsistent attitude maintained by some of the older, abler, and more influential members of the medical profession towards the victims of venereal disease. It is not my present purpose to deliver a lecture, preach a sermon, or sing a song, but merely to offer a few words, based upon solid practical experience, concerning what I regard as a glaring reflection upon our own chosen profession. I refer to our attitude concerning those diseases of the bodily outlets at which we turn up our distinguished scientific nostrils and—refer with cold disdain to the tender mercies of the shameless parasites who profess to "make a specialty" of certain maladies which they are pleased to denominate as "private." We toss a juicy ham bone to a dog in the back yard and then stone the dog for gnawing the bone.

More than a generation ago my honored and beloved preceptor, a favorite pupil of the renowned Gross, used to exhaust the vocabulary of wrath and scorn upon those wretched impostors who befouled their hands with hemorrhoids and venereal diseases. He was himself admittedly, the first surgeon of the community a man of lofty ideals and clean habits, a genial, helpful beside consultant, abounding in what all agree in calling common sense, and yet he was so blind to the real teachings of science as to refer with high contempt those suffering with acute venereal infection to a blatant impostor who did not know even the gross anatomy of the parts involved. A "pile doctor" came to town and, as usual, proceeded with great promptness to supply the local newspaper with some reading notices that no man of real character would ever have thought of inserting. My preceptor laughed heartily as he bet me a brand new copy of "Gray" that the noisy advertiser could not even name the arteries supplying the rectal tissues. One day, in what Macaulay might call a periodic spasm of professional virtue, he declared to me that it was a moral outrage to send murderers and horse thieves to the penitentiary and leave at liberty "private disease specialists."

After the lapse of nearly forty years I am sorry to say that the general attitude of the medical profession has not much

changed. I do mean to say that it has not changed at all. One evening in New York, while engaged in intimate private conversation with a distinguished surgeon of that city, I happened to mention the name of a well-known rectal specialist of high scientific attainments and a man of deservedly eminent reputation. To which my friend responded with a broad smile, "A fine man and a splendid operator, but I would hate to be pointed out at social gatherings as a rectal surgeon." One day, during my long residence in Chicago, I asked a professional friend why a certain man of distinguished scientific attainments was not received more cordially at social gatherings. "Because," he replied, "if a man receives him with enthusiasm on account of his literary distinction, the act will instantly be credited to a case of gonorrhoea." A beautiful state of affairs, surely!

For many years past I have made it the rule to treat venereal infections precisely as I deal with appendicitis, hernia, and gallstones. Scientifically, I know no difference whatever between them. Sometimes while looking through my microscope I have thought that gonorrhoea was fully as good-looking as cancer or sarcoma. So far as hemorrhoids are concerned, they ought to be considered, like small potatoes, upon their merits. If we could only forget that we are operating upon hemorrhoids and remember that we are operating upon individuals, I believe that some of our results might be more satisfactory. In some cases the ligature produces ideal results, whereas in others the clamp and actual cautery are to be preferred. While it is generally indelicate to refer to one's own personal practice, I must say in this connection that I know of no advertising quack in America or elsewhere whose record in the successful treatment of hemorrhoids surpasses my own. The number of my cases comes far short of a billion, of course, but I am more than thankful to be able to say that the general principles of scientific surgery will always yield the best possible results in human hands. We must treat these cases precisely as we deal with fractures of the skull or ulceration of the stomach.

Let it not be inferred from anything that I have written that I have any patience whatever with the nauseous pretensions of the modern "private disease" specialist. He has grown fat from our own sloth and stupidity and no wonder that he feels something of his own im-

mense self-importance. That he treats us with consummate arrogance is to be expected. The climax, so as I know personally, was reached when a pretended venereal specialist called in a blustering apostle of a Western mechanical cult to inject a certain much-vaunted German "specific" into the median cephalic vein for acute syphilis. The "specialist" apologized that he was "nervous"; he must have been, and more likely than not ought to have had an "adjustment" applied on the spot. My own private opinion was the patient ought in the first place have consulted some high-grade physician. A "drugless healer" and a "nervous" specialist in "private idseases" do not appeal to me as insuring a hopeful outcome in any case where scientific knowledge and operative skill are required.

Cerebrospinal Syphilis—Dinnick writes in *The London Lancet* that the manifestations of cerebrospinal syphilis may vary from dull, persistent headache, vague neuritic and trophic signs to petit mal, epilepsy, or psychic disturbances; from basal meningitis to pseudo-tubercles; from cranial nerve affections and choked disc to myelitis. Generally regarded, these lesions occur comparatively early, are rapid in onset, and wide in nervous manifestations; are accompanied by very marked changes in the spinal fluid; and respond well to judicious but energetic treatment. Often the lesions are so focalized as to justify the presumption of their being gummatous in origin; others suggest a more diffuse meningeal infiltration, as in pseudo-tubercles; others, again, from paucity of spinal fluid cellular count are recognized as syphilitic endarteritis. These cases of non-parenchymatous nervous syphilis are very often accompanied by suggestive pupillary findings—varying from fixity, irregularity, and sluggishness to loss of the light reflex.

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IN THE REALM OF THE "SUBCONSCIOUS."

By Dr. Axel Emil Gibson, Los Angeles, Cal.

The psychological question is not whether or not the mind can control the body, but rather what the mind stands for in its specific relation to the body. The old belief that the mind—by which is meant the sum total of psychic powers in man—has its sole seat in the brain, and from there exerts its supreme influence over the bodily functions, is, in the light of recent discoveries, no longer scientifically tenable.

Sir George H. Savage, M. D., F. R. S., the famous English alienist and psychologist, has recently demonstrated that the larger scope of human emotions do not arise in the brain, but in the various physiological centers of the body, viz., the spleen, liver, lymph-spaces, ductless glands and the various nerve-plexi. He found that an individual may tremble under the strain of racking emotions, and yet the keenest microscopical test fail to detect the least disturbance in the cellular structures of his brain. It is in view of these increasing complexities in the study of human nature that the practice of psycho-therapy becomes so important a factor in our brightest hopes and gravest responsibilities.

In medical practice the physician often encounters entirely unsuspected physiological reactions arising from the drug, as the latter takes effect in some deeper, indeterminate center of the system. In psychotherapy, where the healer deals with the infinitely deeper problems of the mind, the embarrassment must be correspondingly graver. In place of having to contend with the concrete reactions of physiological chemistry, the psycho-therapist must be prepared to face reaction from that vast unexplored realm of the "subconscious"—the "dark continent" of the mind.

The Problem of "Multiple Personality."

In the light of Dr. Savage's discovery the subject of "multiple personality" receives a new significance. For if there are distinct centers of subconsciousness located in different ganglionic or cellular groups in the human body, nervously and psychically independent of the brain—it follows that there must be corresponding "personalities" or "subconscious egos" endowed with intelligence to conduct the functional processes of the organs with which they are connected. In other words, the "multiple personalities" of

psychology may to a large extent be made up by physiological functionaries, engaged in engineering the specific centers or municipalities of the great body-commonwealth of man. Hence we must be prepared to accept a pulmonary personality, a hepatic, renal, splenic, cardiac, gastric, personality sustaining and directing the cellular activities of the respective organs under their control.

As diseases have their origin on both the mental and physical plans, their successful treatment must involve both mind and body. This provides an ample field of usefulness both for the physician of the former and of the latter. In either case, the method should be that of restoration only, for as the universal cause of disease lies in a physiological interruption of nature—in obstructions thrown into her individual paths of power—so the only evolutionally loyal and life-sanctioned system of healing is the employment of means and methods by which these obstructions may be removed. If the cause is of the mind purge the latter by self-conscious appeals to its moral and spiritual nature; if of the body, open wide its channels and avenues of elimination. Existing on different planes of evolution, and unfolding under the operation of self-limiting laws, matter and mind require treatment specifically adapted to their own uniquely organized natures.

Invisible Functionaries.

In his labors of demonstrating the functionings of extra-cranial centers of consciousness, Dr. Savage has a strong support in Dr. W. A. Hammond and M. de Biran, who observed that people accidentally bereft of large portions of their brain were yet able to continue to perform the functions of digestion and assimilation. Similarly, birds, cats, dogs and horses, with eyes bandaged, have found their way home in perfect independence of their loss of physical vision—which all goes to show that there are centers of consciousness in the human-animal body equipped with power to maintain, independently of the brain, their vital needs and necessities in relation to life and evolution.

These centers of consciousness, however, as related to the distinctly animal functions of life, must be expressions of the very evolutionary forces typical to the animal itself. In other words, the management of our physiological existence is in the hands of animal or elemental functionaries whose source and power of intelligence are on the plane of instinct

rather than of reason. Hence it follows, that our relation to these powers should proceed in terms of moral reactions, engendered by means of personal self-control, rather than in a direct psychic stimulation of their functions.

To stimulate a diseased or weakened function, the mental healer generates in his mind a current of psychic energy which he conducts into the corresponding organ. Now, however, as this organ is under the control of a mindless, instinct-governed entity, equipped with the propensities and animal brute-force characteristic to creatures of natural evolution, it follows that the reactions of the mental or psychic stimulations, besides affecting the physical and vital aspect of the organ, also generates changes on the corresponding instinctive and psychic plane. And while the effect of the former may be directly manifest in an increasing vigor and animation of the organ, the deeper effects—arising from the psychic stimulation, as distinct from the physical—may sink unnoticed into the “subconscious”—to be manifested later.

The Human Body—a Psychic Menagerie.

The dangers involved in dealing with the psychic phase of life in the practice of mental therapy are thus readily realized. The current of energy induced into the psychic nature of a function may bring about the same result as when a red colored cloth is held up against a bull, or a piece of meat dropped into a cage of hungry carnivora. For the human being is at once the animal and its tamer—his “lower self” consisting of a veritable menagerie in which is represented every instinct and propensity of animal nature—from the innocence of the dove to the ferocious energy of the lion.

When we consider the correspondence between physical conditions and psychic symptoms, between diseases of the body and feelings of the mind, we will find nothing fantastic or unreasonable in the attempt to diagnose the functional disturbances on the basis of a psychic condition. Thus, we find afflictions of the liver invariably associated with a more or less angry, sullen, disagreeable disposition; while diseases of the lungs—at least in their chronic form—(as diseases to manifest in positive mental reactions must have time for their development)—are characteristic of optimism, hopefulness and high personal ambition. On the other hand, in afflictions of the spleen we are met by the psychic symptoms of lassitude, personal indifference and the con-

dition known as the “splenic” attitude. Gastric disorders are associated with the feelings of misanthropy, which in an excess of self-depreciation and general disgust with life may intensify into a desire for self-destruction. Finally, in afflictions of the solar-plexus—the “abdominal brain” of Oliver Wendell Holmes—the whole psychic nature of the individual is thrown into feelings of moral and ethical reversion that may give rise to derangement of the entire gamut of personal consciousness.

This danger of mental healing stimulating the instincts of human-animal nature into uncontrollable bursts of psychic energy or emotion is not the only one that threatens the mental therapist. In efforts of self-healing—auto-therapy—he must be prepared to face new difficulties. For in stimulating his body the mental healer draws energy from his own higher self—from the creative resources of his own spiritual life—the dissipation of immortal impulses into sensuous physical processes. For as the motive of any act determines the source and character of the forces engendered in the act, so the process of mental healing, if the object be the stimulation and cure of the body for its own sake, is reduced to an entirely personal act with the flush of power derived from the individual reserve forces of the healer. From this it follows that so far as healing involves direct physical benefits, its sources of power are limited to personal resources; while, on the other hand, it requires the impersonal, altruistic motive, to establish a reciprocity with universal and super-personal force-centers. Or, in the words of the great world healer of Nazareth, “He that findeth his life shall lose it and he that loseth his life for my sake shall find it everlastingly.”

The futility of egotism as a factor of progress is more and more becoming realized in modern scientific thought, while the element of self-preservation from the Darwinian point of view is rapidly losing ground as a factor in evolution. Self-preservation, for its own sake, so far from promoting the life and powers of an individual, marks the very turning point whence starts his downward career. For the egoistic phase of self-preservation brings about self-isolation, and the latter, whether in natural or cultural evolution, whether in the economy of life or the economy of commerce, leads inevitably to individual or racial degeneracy.

The power of life is contained in the conduct of life. An individual attending

to the needs and necessities of his body with the same painstaking yet dispassionate interest as he would a costly vehicle of service, would become powerful and resistless as a nature force—bringing into fullest expression the possibilities of his evolution. From the bogs and pitfalls of an almost universal invalidism the individual would rise to a platform of triumphant, all-mastering efficiency.

For, given the right conditions to work with, the efficiency of our psycho-physiological functionaries to sustain life, health and power is practically incalculable. Every wild animal or savage is a guaranty of this power. But it is no less a certainty that these functional sustainers depend for their efficiency on the conditions with which they have to deal. If we live natural lives—not for pleasure only but for usefulness, not for stimulation but for animation, not for what we can get out of life but for what we can give to life—we will furnish conditions that shall enable these builders of our body-craft to bring out the highest display of health, power and beauty in our nature. And it is furthermore by observing these laws of life, and only by observing them, that the mental healer can become a living power in the service of humanity. But he must never forget that the laws of the mind and the laws of the body are distinct and separate, and that the only safe force applicable to a diseased mind is the moral force. And as the moral factor is the main determinant in maintaining the health of the mind, so it must follow that the only safe and sane treatment of the latter is the treatment which involves the moral conduct of the individual. More than three-fourths of the world's diseases have their root in selfishness, and the same percentage can be cured by living the life, in thought and deed of brotherhood and altruism.

On the other hand, a cure of the body, if not based on a moral readjustment of the mind, has a mere passing value, and sooner or later gives way to a reappearance in a new form of the original cause.

It is not the soul that exists for the body; it is the body that exists for the soul.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—*Annales des Maladies Veneriennes*.

THE SUPERNUMERARY RIB.

By Dr. W. Parrott, Kinston, N. C.

The condition while recognized over 150 years ago, and first brought to the attention of the profession by Hunolt received no very great consideration until 1869 when Gruber first fully described it. When you consider the fact that one percent of mankind is affected with lesions due to the supernumerary rib it should receive more attention. Miller states that fully 16 percent of all cases of cervical scoliosis is due to the supernumerary rib, and if scoliosis is combined with symptoms of brachial neuritis the percentage will run much higher. If you add to the above two symptoms, a Claw hand you may be reasonably sure that the roentgenogram is going to show something interesting. Not all of these classic signs, and indeed sometimes not one of them are present, however with the cervical rib. Without the roentgenogram the diagnosis is well nigh impossible. Keene elaborates some clinical symptoms which he suggests as diagnostic; but the man who attempts to make a diagnosis from clinical symptoms alone stands a good chance to confuse it with Pott's disease, tumors, and even tuberculosis of the lung. The fact is any chronic painful disability in or around the shoulder joint may be mistaken for a cervical rib. In one of my cases which very closely simulated classic clinical symptoms of the cervical rib, I was much surprised to find a metastatic sarcoma of the right lung. The roentgen ray is the best single diagnostic agent we have in this. Now I do not mean by that that a Rontgenogram poorly interpreted is to be relied on. The fact is that at least three plates taken anteriorly, posteriorly and lateral are necessary. And these must be well studied. The findings should be backed up by clinical data.

The meager literature on the cervical rib indicates that it is decidedly more frequent in the female than in the male, the proportion being about two to one. While cervical ribs are of course congenital, they rarely give symptoms before the tenth year of life. Indeed, I know of no reported case before the tenth year.

As a rule, cervical ribs are found on both sides in fifty percent of the cases. When appearing on one side, the left is more often the one. They occur in families. Drehmann found eighteen in one family and it has been found in both mother and son. Gruber classified them in four groups: In the first group there



are only small nodes, which are as capable as fully grown ribs in producing symptoms. He states that some of the most pronounced symptoms arise from these small nodes. These nodes are sometimes so small as to hardly extend beyond the lateral traverse processes of the vertebra. In the second group there are blunt fingers or bones, 4 to 5 c. m. in length. In the third group we find those extending far enough forward to join the first rib, which may be attached to the sternum by a small ligamentous cord. In the fourth group there are complete ribs with perfect origins and insertions.

Now, while there are many cases of cervical ribs without symptoms, still they appear in varying degrees from mild to severe symptoms. These symptoms not in proportion to the length of the rib. Sometimes no symptoms appear until late in life when they are set up by trauma. Here is where it is easy to go wrong in the diagnosis without a roentgenogram. Tuberculosis of the pulmonary apex frequently accompanies the cervical rib, and in some instances apparently causes it. The supernumerary rib, is frequently the seat of a periostosis. Nerves subjected to

the constant pressure of the rib, of course, are affected by the trauma. The subclavian artery is frequently the seat of arterio-sclerosis and vascular symptoms in the hand arise.

I beg, herewith, to show one case: There is no tumor on side of neck behind the clavicle at thoracic apex and no widening of the neck. The fact is inspection or palpitation neither suggests the condition.

Closely studied roentgenograms reveals the case of the first group taking Gruber's classification. There are slight vascular changes, the pulse being a little different in the sound side. The fingers show a slight oedematous condition. The hand is slightly colder on the affected side, this being the only trophic disturbance noted, excepting neuralgic pains which often radiate down the back of the neck, shoulder and ear. Claw hand is not prominent in this case; there is no paralysis. As a rule the drag on the nerves prevents anything being carried in the hand.

The course of the condition continues for an indefinite number of years in which there are intervals of complete freedom. Some cases come on insidiously. Of

course, the very severe cases can only be dealt with surgically, but those that are mild do not require radical treatment. Rest and massage being the great measures of value. Applications of heat and cold should as a rule be avoided. Excision of the supernumerary rib should be a dernier resort and then only by a surgeon of experience in nerve and bone work.

BONE, FASCIA AND FAT GRAFTING.

By Addison G. Brenizer, M. D., Charlotte, N. C.

This paper partly embraces three publications of mine: (1) "Total Bone Grafts Into Skull Defects" (Annals of Surgery, November, 1916); "Bone, Fascia and Fat

Grafting" (Now prepared for the Annals of Surgery) and "The Use of Intra-medullary and Extra-cortical Beef Bone Splints in the Repair of Long Bones" (Soon to appear in Surgery, Gynecology and Obstetrics).

Viewed in the light of experimentation and of bone grafting done in man during the last few years, it is remarkable that so few cases of total autoplasmic bone transplants into skull defects have been reported in the literature. Up to November, 1916, including my own, there were only ten cases reported.

Defects in the skull show little spontaneous tendency to become filled with bone, differing especially from long bones, which fill very rapidly.

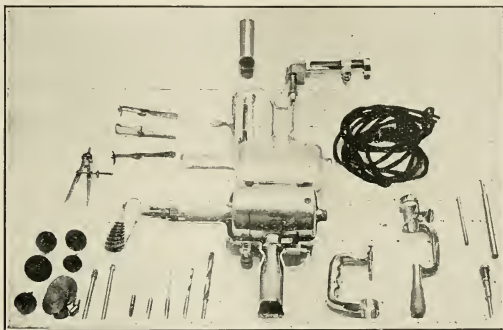


Fig. 1.—Some modern bone instruments showing a sterilizable motor and connecting cord, circular saws, twin saws, trephine, burrs, drills, spiral bone cutter, dowel cutter; with guards, lathe, etc., for the same. Every part can be sterilized by dry and moist heat. (Chas. Geiger.)



Fig. 2.—Case 1. Six weeks after the operation and the site of the old skull defect filled in by the bone transplant. (Brenizer.)

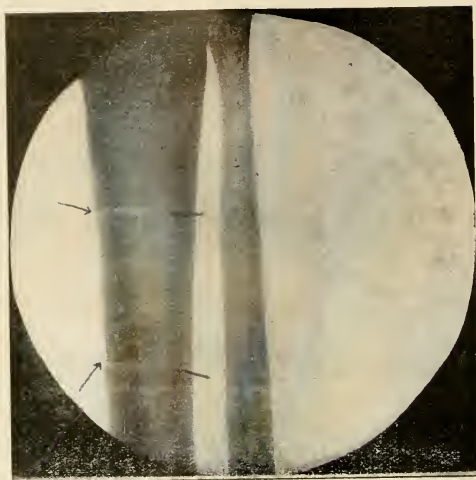


Fig. 3.—The site where the graft was taken from the left tibia. The origin of the graft is well filled in and smooth even after six weeks. (Brenizer.)

The two head cases to be cited directly were of six and fifteen years duration, both had been previously trephined and both showed but little growth of new bone around the edges and that irregular. The same cases showed an even filling out with bone and a limiting of the bone to the site of the former periosteal covering at the location where the bone transplant was taken, and this took place in six weeks' time. Where the graft was taken from the tibia, the surface was smooth and there was no overgrowth of bone. There was evidently a new limiting per-

ioseum formed from the bordering connective tissue and the underlying bone cells. But why this remarkable shaping and control of spontaneous bone growth in the case of long bone and the failure in the case of the skull?

In the case of the skull we have a beautiful demonstration of the fact that bone taken from elsewhere in the body and placed where functional demands are made upon it, it will grow and will grow in a location where spontaneous regeneration of bone on the part of the skull is very weak. In case of the tibia, where



Fig. 4.—Case II. Two weeks after the operation, showing the site of the old skull defect filled in by the graft from the patient's left tibia. (Brenizer.)

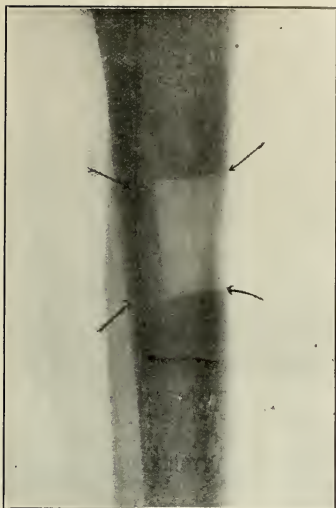


Fig. 5.—Showing location on the inner surface of the left tibia where the graft was taken. (Brenizer.)



Fig. 6.—Case V. Young woman with tuberculous spine, showing kyphosis and scoliosis. Before operation. (Brenizer.)

the graft was taken, we have a demonstration of the phenomenon that bone will regenerate to the point demanded by the functional forces acting upon it and no further. These facts are illustrated in Figs. 2, 3, 4, 5.

"The bone graft, however, does act also as a stimulus to osteogenesis to the bone into which it is ingrafted or contacted" (Albee).

"The inner layer of the periosteum, the endostium, and, to a much less, if not negligible extent, the lining of the haversian canals provide the cells for the osteogenesis in bone repair, to which may be added the comparatively few bone cells in the graft itself which survive." (McWilliams).

A graft cut, as one would a slice of water mellow, including periosteum, cortex and marrow, is done with great difficulty with the ordinary hand tools, but with comparative ease with one of the electric motor bone sets like that marketed by Geiger, Albee or Hartley and Kenyon. Fig. 1 pictures Geiger's instruments.

If the graft be made in this way, nothing further is necessary to insure success, save the attainment of asepsis and the maintenance of immobilization.

I have referred above always to the autogenous graft; that is, taken from the

patient who is to be grafted. Where it is to be expected that a graft of any tissue itself grow, it must be autogenous or possibly taken from an individual of the same blood group. Usually homogenous grafts as well as heterogenous grafts be-



Fig. 7.—Case V. Same case as Fig. 6 after operation, showing correction of deformity. (Brenizer.)



Fig. 8.—Case V. Same case as Fig. 6, showing bone graft from tibia transplanted into spine. (Brenizer.)

come absorbed, but they may be used as splints and supports in the body for a time. In bone they have the advantage over metal, in that metal actually inhibits bone formation, produces bone absorption and favors infection. Living and boiled bone splints from other individuals and even boiled bone from animals does not retard bone growth and likely stimulates new bone formation in the surrounding bone, where grafted.

The credit for the establishment of free transplantation of fascia as a method in plastic surgery belongs to Kirschner, who was the first to write an extensive paper on the subject and to show by experimental work its various possibilities. Quoting Kirschner:

"One of the chief reasons why fascia is such an excellent material for transplantation is that it heals without reaction; both in cases where it is at rest and where rather severe functional demands are

made upon it; autoplasic fascia shows a marked tendency to become incorporated with the neighboring connective tissue. This often occurs even when asepsis has not been perfect. Some surprising results have been obtained in covering over infected hollow organs. The transplanted fascia may undergo changes, such as swelling and vascularization and may be transformed into connective tissue and fat; but in many cases it remains intact in its original form. Fascia has the advantage over other tissues in that it is easier to obtain and in large amounts. There are no serious results which have followed even the removal of large areas of fascia lata."

Marshall adds: "Where great functional demands are made on the fascia, as when it is used to repair tendons, it gradually takes on the structure of the tendon, so that after three months it cannot be distinguished from it. When it is used

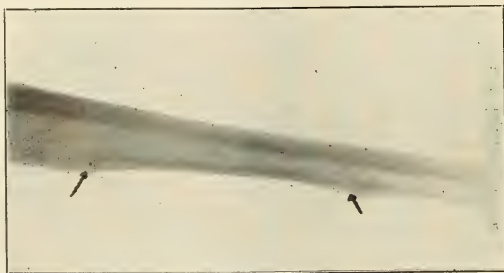


Fig. 9.—Case V, same as Fig. 6, showing the site from which graft was taken, patient's left tibia. (Brenizer.)

to repair defects in the abdominal wall, the same process takes place, but more slowly, the transplanted fascia finally assuming the structure of the surrounding tissue. In the thoracic wall, where there is less tension and where tension is more uniform, the fascia retains its original

structure, even after a year when all progressive processes have stopped. The elastic fibers of the fascia are not only preserved, but they increase and penetrate the surrounding cicatricial tissue, changing the character of the scar so that it becomes more elastic."

Fascia has been used in man in a great variety of situations and for numerous purposes: for bridging defects in muscles, tendons or ligaments, as a substitute for tendons and ligaments, for bridging defects in the walls of body cavities, in hernias and weakened abdominal and thoracic walls, for fastening parenchymatous organs in place, in correcting prolapse, to correct rectal and vaginal prolapse, to suspend the kidney, to occlude hollow organs, to strengthen suture lines in such organs, for covering amputation stumps, for mobilization of resected ends of joints, for filling in bone cavities, for filling in defects of soft parts in plastic surgery, for covering tendons as sheaths, for covering nerve sutures, to replace the dura in brain operations, etc.

Whenever possible, autogenous transplants or homogenous transplants from an individual of the same blood group should be used.

Binnie, in speaking of "Some Uses of Fat in Surgery" says: "In spite of its reputation as a tissue of poor resisting power, fat is well suited for transplantation.



Fig. 10.—Case VI, showing condition of the spine in cases V and VI. (Brenizer.)



Fig. 11.—A diagram showing where and how the graft is made in cases V and VI (After Albee.)



Fig. 12.—Case VII, X-ray showing tuberculous caries of 7th and 8th thoracic vertebrae with marked kyphosis and scoliosis. (Brenizer.)



Fig. 13.—Case VII, same as Fig. 12, after bone graft into spinous processes. Pad over back wound and scar over left tibia are seen. (Brenizer.)

In many instances it is undoubtedly the connective tissue basis of the fat which is of value in the transplant, but in other instances other varieties of connective tissue would be valueless compared to that which is infiltrated with oil."

He then refers to the use of fat transplant to stop bleeding in the liver and kidney; to fill cranial defects; to fill up a depressed area resulting from scars on the face; for implantation in bone cavities, when the diseased tissue had been chiseled out of the bone, to close suppurating and tuberculous cavities, etc.

Risley, writing in 1917 on "Hemastasis by Interposition of Muscle, Fascia and Fat in Parenchymatous Organs," reports a number of experiments on dogs with the above substances to stop bleeding in the liver or kidney and gives the following conclusions:

"The ideal hemastatic in wounds of parenchymatous organs is interposed muscle tissue taken at the time of operation from the patients own body."

"Such muscle, in order to most effectively stimulate fibrin formation should

be jaggedly cut, nor should its hemastatic properties be extracted by its contact with salt solution."

"Fascia and fat act to a more limited degree as hemastatics: fascia more than fat, but both less than muscle. In the liver, however, both fascia and fat seem at times to be very efficient hemastatics."

"These tissues readily unite to the bleeding surface to which they are sewed and form a smooth, solid scar."

"Microscopical examination of specimens removed at varying intervals after operation show in our series absence of sepsis, a beginning transformation of muscle into fibrous tissue, a partial absorption of fat and change into fibrous tissue, no change in fascial transplants, in practically every case a firm blending of the interposed tissue with the cut surface of the parenchymatous tissue, the formation of new blood channels and no degenerative changes of note."

My case report and illustrations will give the reader a fair idea of some of the uses of bone, fascia and fat grafting and



Fig. 14.—Case VIII. A graft has been made from the left tibia into the split spinous processes of the lower dorsal vertebrae. A toitoise cast is placed to support back. (Brenizer.)



Fig. 15.—Tolitoise cast as used to support the spine after operation, made and ready before the operation. (Brenizer.)



Fig. 16.—Same patient as Fig. 14, 6 weeks after operation. Deformity corrected. (Brenizer.)

the technical points in making the transplants:

Case I: A man thirty-five years old, whose head was severely crushed in a railway accident six years previously. At this time his head was trephined and some bone splinters removed. Shortly after this he developed "spells" when he would lose consciousness and "spasms" mostly on the opposite side. Speech slow, apperception dull. There was a large depression over the left side of the skull, the soft parts drawn down tight and the bone deficient over an area about 4 cm. by 6 cm. The soft parts were loosened up, the scar tissue removed, the callus around the edges cut away and the edges

beveled at the expense of the outer table. Into this defect was grafted a rectangular bone shell taken from the tibia, cut and bevelled to fit. A few stitches were placed to unite the periosteum of the graft with that of the skull, and the wound closed. The graft was covered with periosteum and was cut just to the marrow cavity. Fig. 2 shows a picture of the man six weeks after the operation and the site of the old skull defect filled by the bone transplant. Fig. 3, the site where the graft was taken from the left tibia. The origin of the graft is well filled in and smooth even after six weeks. The case was operated on about a year prior to November, 1916, and the last I heard from



Fig. 17.—Same case as Fig. 16, shows amount of flexion possible after operation. (Brenizer.)



Fig. 18.—Case IX. Tuberculous caries of 3rd lumbar vertebra. Before operation. (Brenizer)

the man was that his head was well closed and that he had not had a "spell" in a number of months.

Case II.—A man twenty-two years old, kicked in the head by a mule fifteen years previously. Some bone was removed, some came out from time to time, leaving his head sunken in. He formerly dragged the leg on the opposite side and dropped words. Had great deal of headache and pain over the depression. Head was trephined a year ago, symptoms better for a while, again worse. Depression and opening in the skull about 3 cm. by 4 cm., the soft parts were drawn down and attached. The soft parts were liberated, scar tissue and callus removed, dura



Fig. 19.—Same patient as Fig. 18. Patient after tibial graft into spinous processes rolled over with cast onto stretcher. The leg where the graft was taken is bandaged. (Brenizer.)

freed and the edges bevelled to receive the graft from the left tibia. Fig. 4, is a picture of the patient two weeks after the operation and of the site of the skull defect filled in by the graft, and Fig. 5, the location on the surface of the left tibia where the graft was taken. The man after four weeks reported himself improved.

Case III.—A young woman who had been operated on for goiter. The skin over the neck was much scarred and attached to the underlying structures. The skin and soft parts were dissected out, the thyroid cartilage and trachea covered with a strip of fascia and fat, the fat to-

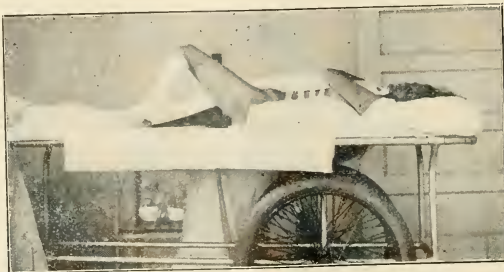


Fig. 20.—A diagram illustrating the way a graft is embedded in the split spinous processes as in cases VII, VIII and IX. Figs. 13, 14, 19. (Albee.)

ward the trachea, the sterno-hyoid and sterno-thyroid muscles united and the skin closed. The movements of the deeper structures under the muscles and skin are free and normal.

Case IV.—Gun shot wound carrying away the greater part of the left cheek. The defect was filled in with fascia and fat, the fascial side turned toward the mouth cavity and only partially covered by mucous membrane, the fat side turned exteriorly and covered by a skin plastic. The skin wound healed the fascial surface became covered with mucous membrane. Cosmetic result excellent.

Case V.—Figs. 6, 7, 8, 9. Case of tuberculous spine in a young woman, with marked scoliosis and moderate kyphosis. Fig. 6 is the case before operation; Fig. 7 the same case after operation; Fig. 8 the bone transplant embedded and growing in the spine; Fig. 9 the site on the left tibia where the graft was taken.

Case VI.—Fig. 10. X-ray of tuberculous spine in a young boy, now under treatment with a series of plaster casts for sufficient correction for grafting. This case illustrates the condition of the spine in both this and the preceding case V.

Fig. 11 shows where and how the graft is placed in these cases V and VI.

Case VII.—Figs. 12 and 13. Fig. 12, an X-ray of the spine in this case shows the tuberculous lesion of the seventh and eighth thoracic vertebrae, with marked kyphosis and slight scoliosis. Fig. 13 is the same case, already operated upon and in the position for operation. The skin incision is almost healed and is covered with a pad. The skin incision on the left leg over the tibia, where the graft was taken, can be seen.

Case VIII.—Figs. 14, 15, 16, 17. In Fig. 14 the girl has been operated upon, the wound dressed and a toitouse plaster cast, well padded, placed over the back to support the spine. The patient is rolled over into this cast and tied in with bandages for the first few days. Fig. 15 is the cast, made to fit the back the day before the operation; the correction and the dressing are allowed for in molding it to the patient. Fig. 16 is the girl after operation. Fig. 17 shows the amount of possible flexion of the spine after the operation.

Case IX.—Figs. 18 and 19. In Fig. 18 is seen a tuberculous caries of the third lumbar vertebra in a woman forty-eight year old. Fig. 19 is the same case rolled from her abdomen on the table to the stretcher and lying in the cast for sup-

porting her spine and with the left leg bandaged. The graft was taken from the left tibia and tied into the split spinous processes, bridging the spinous process of the carious vertebra.

Fig. 20 is a diagram illustrating how a bone graft from the tibia is placed into the split spinous processes and bridging the spine of the carious vertebra. This is Albee's operation.

This paper with a further case report of fifteen more cases and thirty-five more illustrations will be continued in the next issue of the Charlotte Medical Journal.

609 North College Street.

WHY THE MEDICAL PROFESSION WILL EITHER REORGANIZE ON AN ECONOMIC BASIS OR FORM INDEPENDENT MEDICAL ECONOMIC ASSOCIATIONS.

By Geo. H. Tichenor, Jr., A. B., M. D., Associate Editor Western Medical Times.

In nine states, legislative commissions have been studying sickness conditions with a view to the framing of health-insurance laws. The Ohio commission arrived at the conclusion that the only just and effective solution of the problem is, health-insurance legislation. The New York Senate has recently passed a workman's health-insurance bill. In the consideration of these bills the interest of the independent insurance company, medical cliques, medical co-operative partnerships, hospital staffs, labor associations, corporations and their sympathetic press will be especially protected while the interest of the general practitioner will be neglected as usual.

Our so called "leaders" have never shown very great interest in the welfare of mass of the profession. Why should they when the mass have only an indirect say in their election to office? Here is where the trouble is going to start and the final outcome will be decided by the general practitioners.

It is the general practitioners in the cities, towns and country places whose economic and social welfare has to be considered just as much as that of the corporations and their sinecures. If labor is not receiving its just returns for its labor, it is not the fault of the medical profession but of its employees—they are the one to be dealt with.

The medical profession is now revolting against the system of spoilation and graft it has been compelled to submit to for centuries.

The employer must pay his labor enough for him to have a margin after paying for necessities for the doctor, etc. If we are to be socialized other industries must also be compelled to do the same thing. The Bolshevickism of Wall Street does not appeal to us; we neither belong to the plutocratic nor proletariat—but are neutral, laborers whose services after sixteen years of preparation after leaving the grammar grades, expending about \$20,000 for same, can command the same salary as the ordinary insurance agent or unskilled labor—the majority of whom like the medical profession receive \$750 annually.

The reason for this condition lies in the fact, first we are grafted upon by means of the so-called charity hospital thrust upon us by the clergy for the benefit of vested interests, the employer is saved the expense of paying the labor enough to get a physician after meeting legitimate expenses. Remedy minimum wage scale, mothers' pension, old age pension, health and accident insurance laws under state control, and the limitation of wealth, state seizing all wealth after death above a fixed amount (this allows for competition which practically does not exist at present). The clergy are rapidly losing their intelligent Christian membership through neglect in teaching the justice of the Great Economic Reformer. The clerical idea of charity, the commercial brigand doling out dribbles of his extorted gold for the benefit of his economic wrecks and the injunction of these sinecures not to curb laudable ambition and such noble enterprise is meeting its just rebuke.

Secondly, we are in competition not only with eleemosinary and charitable institutions but also government physicians in the various federal and state health departments, surgeons in the army, navy, marine hospital, narcotic and venereal disease officers with the disadvantage of not being supplied with government "paper"—a condition most energetically fought by the vested interests when it comes to government ownership, building of ships at 10 per cent plus cost of production, fought by labor when it has to compete with convict labor, the press when the government suggested and employed editors for the army news bulletins for free distribution of news. We object most strenuously to this quasi-socialization of medicine and our having to compete with same with even some of our own money. "What is sauce for the

goose is sauce for the gander."

We either want one system or the other, either complete socialization for everybody or private initiative for everybody. This country was founded upon the idea of a square deal for all and that is what we are going to have sooner or later.

Third, we are the victims along with the public in general of impossible competition. Two per cent of the people possess over sixty per cent of the national wealth and this concentration of the property of the country in fewer hands is increasing, and a very small group of financiers among this two per cent virtually control the situation. Poverty is the national asset of the masses. Four-fifths of the wage earners of America receive a yearly salary of \$750. Reports from the Bureau of Commerce of New York show it requires at least \$848 yearly to provide for a family of five decently, giving the necessities of life.

Where wages advance, the price of living advances and the cost of necessities are about the same all over the country. What appeals to us most at present is the rapid advance in the cost of necessities with the lowering in some instances of wages. The following clipping from The New Orleans Times-Picayune is an illustration not only for New Orleans but all over the country. When and how is this condition to stop. **Be careful of the kind of social insurance you accept.**

"The Shrinkage of the American Dollar" would be a fitting title for a comparative table of cost prices today and five years ago, compiled by Jesse W. Ford, 1630 St. Andrew street.

According to Mr. Ford's figures, which he says are obtained from authoritative sources, it costs a married man more than twice as much to live today in New Orleans than it did five years ago.

In his calculations he uses a family of five as the unit. Costs of clothing are not considered by him in his tables, but he says clothing probably has kept step with other articles in every-day use in the climb up the high-price ladder.

In March, 1914, according to Mr. Ford's figures, Mr. Average Man of New Orleans with a family of five spent \$74.97 for the necessities of life, exclusive of clothing. In June, 1919, the same articles would cost \$157.39, he figures. Clothing, amusements, doctors' and dentists' bills, he does not include in the reckoning.

In obtaining his figures, Mr. Ford said he used wholesale quotations and added 10 per cent for the retailer's profit.

Big Increases Shown.

In no instance has there been a reduction, he said, adding some articles of food, none of which can properly be classed as luxuries, have trebled in price. The average increase is a trifle more than 100 per cent, according to his calculation.

Flour is one of the leaders in the price boosting field, Mr. Ford's figures indicate. On the basis of 100 pounds, which he deems a fitting allowance for a family of five, there has been an increase from \$2.75 to \$6.79, he said.

Following the same system of reckoning, the family at the end of June must pay \$11.75 for its 100 pounds of rice, while in March, 1914, the same amount could have been purchased for \$4.40, Mr. Ford's schedule says.

Sugar has kept pace with its companions, selling today at 10 1-4 cents a pound as compared with a fraction over 6 cents in the before-the-war days. Mr. Ford figures that the sugar bill on a 100-pound basis now amounts to \$10.25 when five years ago the sweetening for the family would have cost but \$6.43 for the month.

Red beans are nutritious but are by no

means cheap in these post-war times, according to Mr. Ford, who figures fifty pounds of beans, the amount set aside for the family, cost \$2.45 in the "good old days." Bought today the housekeeper will get 5 cents back from her \$5 bill, he said.

Macaroni hasn't fallen behind in the high-price race. Here again Mr. Ford allots fifty pounds for the family. This toothsome commodity has struggled upward from \$1.90 to \$4.68, he said.

But there are other items than mere food. Car fares, for instance. Here the price has gone up a cent a ride and on the statistician's basis of 100 rides during the month, there is a difference of \$1.

Increase in Rents.

In his rent estimate, Mr. Ford notes an increase of \$4 a month on a tenement that rented for \$11 five years ago. Gas has increased from \$1 to 1,000 cubic feet to \$1.30. Figuring 6,000 feet for the family Mr. Ford makes a month's increase of \$1.80.

Butter, ham, bacon and milk, all have risen from 15 per cent to 150 per cent, he says. Here is his table:

	Retail Price March 1914	Amt. Cost March 1914		Retail Selling Price Today	Cost Today
100 lbs. Rice, at	.044	\$ 4.40	Same Amount	.1175	\$11.75
100 lbs. Suar, at	.643	6.43	Same Amount	.1025	10.25
50 lbs. Flour, at	5.50	2.75	Same Amount	13.58	6.79
15 lbs. Butter, at	.33	4.95	Same Amount	.77	11.55
40 lbs. Lard, at	.11	4.40	Same Amount	.275	11.50
30 lbs. Ham, at	.209	6.27	Same Amount	.4226	12.67
15 lbs. Bacon, at	.198	2.97	Same Amount	.4226	6.34
50 lbs. Grits, at	3.30	1.65	Same Amount	9.24	4.62
50 lbs. Macaroni, at	.038	1.90	Same Amount	.1935	4.68
100 Street car fares, at	.05	5.00	Same Amount	.06	6.00
50 lbs. Red Beans, at	.049	2.45	Same Amount	.099	4.95
50 lbs. S. Meat, at	.05	2.50	Same Amount	.297	14.85
50 lbs. C. Meal, at	3.30	1.65	Same Amount	9.24	4.62
1 Case Cd. Milk, at	4.73	4.73	Same Amount	8.91	8.91
500 ft. lumber, at \$15 per M.		6.00	Same Amount	30.00	15.00
6,000 ft. Gas, at \$1 per M.		6.00	Same Amount	1.30	7.80
Dwelling House rent, at		11.00	Same Amount		15.00
Total per month		\$74.97	Total per month		\$157.39

4007 Magnolia St., New Orleans, La.

Children and Cod Liver Oil

A quality of most cod liver oil preparations which makes them objectionable to children, is their unpalatableness, which becomes marked as the patient continues with it. As a result of this obnoxiousness of the average cod liver oil preparation, the choice of one for continued use for children is a matter of the utmost importance.

In Cord. Ext. Ol. Morrhuæ Comp.

(Hagee) the physician has a preparation of cod liver oil which is effective therapeutically and at the same time palatable to the most fastidious taste, making it the ideal cod liver oil preparation for children. While Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is palatable and may be administered for long periods, it is just as effective as the plain oil, containing every therapeutic property of the plain oil.

IN MEMORIAM JOHN P. HARRISON, M. D., PIONEER PHYSICIAN, LOUISVILLE, KY.

By William Lane Lowder, B. S., M. D., Tipton, Indiana.

Greeting.

He own'd the bird songs of the hills,
The laughter of the early April rills;
And his were all the diamonds set
In opening morning's dewy coronet.

And ours, the dusk's first mint'd stars,
That twinkle through the pasture bars,
And litter all the skies at night
With glittering scraps of silver light.

The rainbow's bar from sea to sea
In beaten gold belongs to thee and me.

Biographical Sketch.

One of the most distinguished practitioners and professors of medicine that have graced the profession of Cincinnati, Ohio, hailed from Louisville, Kentucky, where he was born in 1796. He received his preliminary education in his hometown but went to Philadelphia to study medicine. He became the private pupil of Nathaniel Chapman, the renowned medical authority and founder of the "American Journal of Medical Sciences," and attended lectures at the "University of Pennsylvania." He graduated therefrom in medicine in the class of 1819. He returned to Louisville immediately after his graduation and began to practice his chosen profession. He soon became one of Louisville's most successful physicians. He was ambitious to make a name for himself as a medical teacher and author, and decided, in 1834, to remove to Philadelphia and apply for a position in the Medical Department of the University of Pennsylvania.

Daniel Drake, M. D., who was at that time organizing the Medical Department of the "Cincinnati College," wrote Harrison to come to Cincinnati, and take charge of the chair of Materia Medica. Harrison accepted the appointment, and in 1835 came to Cincinnati. Two years later (1841) he entered the faculty of the "Ohio Medical College" as professor of Materia Medica. With the exception of two sessions (1847-'48 and 1848-'49) he retained his chair. During the two sessions he taught "Theory and Practice of Medicine."

He died of cholera in the summer of 1849, as James T. Whittaker, M. D., says of him:

"Like a soldier in the line of duty
With his face fair to the foe."

Personal Characteristics.

John P. Harrison was personally one of the most amiable of men, a gentleman by nature and cultivation. He was a handsome man, erect and straight as an arrow, with a fine intellectual countenance which in his youth resembled that of Robert Burns. He was scrupulously clean and orderly in his appearance and in his habits, well groomed and refined. His office was a model of order and system. Even the appearance of his horse and carriage showed the sense of neatness of their owner. In his lectures and essays he was thoroughly systematic and scrupulously attentive to details. He possessed a fervent temperament which quickly communicated itself to his listeners. His manner of delivery, in moments of inspiration, was quick and impulsive. His was high-pitched and aglow with feeling. In his statements he was bold, positive, aggressive and even defiant. He never failed to impress, arouse, inspire and electrify his audience.

In his writings he was polished and elegant. What he said was clearcut and exact, his phraseology pleasing and often suggestive of the poet rather than the medical philosopher. In his make-up he was the opposite of his famous predecessor, John Eberle. The latter was slow and deliberate, Harrison was quick and dashing.

Eberle presented facts in a cool and practical manner, Harrison paraphrased them in his characteristic fervent style. Eberle was a realist, Harrison was enthroned in a realm of ideas. Eberle was satisfied to let the subject carry him. The two men were totally unlike. In Eberle's writings the subject retained its full value even without the personality of the lecturer. In Harrison's writings the absence of the personal equation, of the fervent manner and the inspiring presence of the author left the subject bare and brilliant and seductive personality. In this respect he resembled his great successor of recent years, James T. Whittaker, A. M., M. D., who was a magician only when he could be seen and heard. Harrison contributed many short papers on a variety of subjects to the contemporaneous medical press. He published a booklet "Essays and Lectures" which are readable. Some of his addresses delivered before the medical classes on special occasions are well worth a careful pe-

rusal. A few quotations will serve to illustrate Harrison's character as a medical man. In discussing the objects of medical societies, Harrison said before the Medical Convention of Ohio May 28, 1844:

"Gentlemen—The science of medicine has been greatly indebted for its advancement to that liberal spirit which binds men together in consentient effort to promote each others improvement. This social kindness belongs to man in all the phases of his being; it is exhibited by the child in the thoughtless gaieties of its existence; it is seen in the various combinations of political partisanship, and with controlling influence it mingles with the adorations which the frail children of earth pay to their supreme and universal Father. It is this spirit of social sympathy operating upon our professional views and interests, which has called us together this day."

Harrison's suggestion for the removal of pessimism and malcontent from the ranks of the profession are:

"1. A diligent study of the science of medicine.

2. A determined will to become eminently useful in the profession.

3. An earnest interest in the progress of medicine.

4. The cultivation of a benevolent regard for the sick.

5. A dignified self-respect.

6. A dignified conception of the moral and intellectual excellence of the profession.

7. A firm belief in the guardian care of Heaven."

In his introductory lecture before the class delivered November 3, 1847, Harrison pleaded for a better preliminary training of medical students. He says that a classical education should be required of every student of medicine. Harrison's discourse on "The Responsibilities of the Medical Profession" delivered in the Louisville Hospital, August 27, 1831, could be profitably read by every doctor and student of medicine today.

Sit Tibi Terra Levis.

(Lightly may lie the earth upon thee)

Valediction.

(A Prophecy)

From ancient Edens long forgot he feels a breath of spring,

And in the leafless appletree he hears a white-throat sing.

With flut'd triplets, clear and sweet, the bird proclaims its joy,

And on the wither'd orchard grass the man becomes a boy.

A boy that runs, a boy that dreams, in April sun and rain,

Who knows all good is happiness, all evil only pain.

Sing on, O white-throat in the tree, he hears nor heads you now!

The years are trampling on his heart and armies o'er his brow.

Lenvoy.

Thus, from ancient Edens long forgot no resurrection comes

Until the smallest sparrow's song is louder than the drums!

Treatment of Extensive Septic Wounds.—Gardiner, in *The London Lancet*, contends that the chief use of gauze dressings is to protect wounds from extraneous infection, and that the objectionable features of their use can be avoided if some other means of preventing infection be provided. The following proves more satisfactory. The wound is incised and all pockets are opened up in such a way as to obtain the maximum effects of gravity in carrying away the discharges. Then an ordinary gauze packing is applied and bandaged on for the sole purpose of checking bleeding and oozing. This is removed after forty-eight hours and the wound cleansed by syringing with some mild antiseptic such as boric acid, or weak eusol, solution. A guard of appropriate size and shape is made of perforated zinc and bent to form a cradle over the infected part. This is placed in position and covered by a sterile towel and a bed cradle is put on to hold up the bedclothes. The discharge which runs from the wound is absorbed by a sterile wool or sphagnum pad placed beneath the part. Twice daily, or often if the wound is uncovered, syringed and swabbed out, the pad changed, and the zinc cradle, towel, and bed cradle are replaced. This treatment is continued until all pockets are closed by granulations, the whole wound surface is granulating evenly, and the discharge has practically ceased. Then the wound is dressed in the usual way until completely healed. At times difficulties are encountered, such as the inability to utilize gravity fully, or the problem of keeping the part in position during sleep. The first of these is overcome by the insertion of a small gauze wick which hangs down over the edge of the wound. The second by the use of a suitable splint. The advantages

of the plan are: Perfectly free drainage, absence of tendency to form pockets; absolute painlessness of the treatment; absence of all manipulation of the wounded part, and great economy in dressing materials.

Apparent Deviations of the Wassermann Reaction.—Thibierge (*Presse Medicale*) points out that one should not expect from the Wassermann reactions more than it can yield. The biologists lead one to expect too much, hence most of the errors of interpretation.

The Wassermann reaction is not a chemical reaction; it is the research of the deviation of the complement—the research of properties of substances of unknown composition existing in unknown doses, but certainly variable, by means of other substances of equally unknown nature existing in the reagent in unknown doses, mixed in this reagent to a quantity of no less unknown substances in proportions independent from those intervening in the reaction.

Besides the antigen contained in the extract of heredo-syphilitic liver, other substances of compound or simple composition give the same reaction or emphasize it; hence have been brought about numerous modifications of the Wassermann reaction.

Errors of interpretation are incredibly frequent, partly owing to the inexperience of some chance operators who are not competent biologists.

Contrary to what some of Ehrlich's assistants thought, one cannot always make injections of salvarsan when the reaction is negative.

It is an absolute fact, fully recognized, that there are periods of syphilis when the reaction is negative, when, on the contrary, paludism gives a positive test.

When chancre is ignored because the reaction is not positive, the practitioner is often confronted with a fully developed roseola soon afterward. But the greatest mischief is that after such wrong prognosis the syphilitic patient is left free to disseminate contagion around him.

In the tertiary period a negative reaction may again be misleading by not revealing 10 per cent of syphilitics, carriers of manifestations in full activity.

On the other hand, a positive Wassermann will be obtained in tuberculosis, for instance, or lupus or psoriasis.

When the disease is confirmed it would be equally foolish to stop treatment be-

cause the reaction becomes negative. This would be especially harmful in the delayed affections of the nervous system.

Because of errors created by false interpretations must the practitioner be deprived of means of investigation on which to base his diagnosis?

No, but the Wassermann reaction must not be taken as error-proof, especially in the first three weeks of manifestation.

As to the marriage of syphilitics, most authorities consider there must be a period of at least four years, possibly six, after appearance of chancre, and eighteen months after last accident.

Aberrant Wassermann.—The *Journal de Medecine et de Chirurgie Pratiques* states that even the best technique may be vitiated by a faulty interpretation. Too great dependence on a negative reaction may result in vicious interpretation, and this is true of the entire course of the disease. Whatever the serodiagnosis, the Wassermann is not a safe guide to treatment, which must be pursued along the old lines—that is, the patient must get his three or four years of treatment, just as if no reaction had been taken; but the latter should, of course, be practiced for statistical purposes. This doctrine is applicable only to the first years of the disease. In ancient syphilis diagnosis by the Wassermann may be the basis of treatment. To use the Wassermann on a syphilophobe as a means of convincing him of his freedom from the disease should not be tolerated, because of the possibility of swindling the patient. In regard to permitting marriage, Wassermann tests should be excluded and no marriage sanctioned until six years after infection and eighteen months after the latest symptoms. This is the general rule, but the period may be reduced to three years in certain cases kept at the start on intensive treatment with a series of negative reactions.

Cancerous Linitis.—According to Carnot, linitis of the stomach is a radiographic syndrome—esophageal retention; retracted stomach, which is also rigid and indispensable and pyloric incontinence. The term linitis as a special affection of the stomach (plastic linitis) is in reality an anatomo-pathologic condition due to several conditions, one being a continuous infiltration with cancer cells. In the author's case the fatal end came from perforative peritonitis.—*La Presse Medicale*.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE MILAGE OF THIRTY-FIVE YEARS OF MEDICAL PROGRESS.

The one who allows himself to become very much retrospective, is lost. This is not to be considered a harking backwards to the dead things of medicine. Rather is it a viewing of a very live past as it in its thirty-five years march comes up to an intensity living onward moving present.

The medicine that thirty-five years ago was at the starting point of the travel, the medicine at the present point of arrival, and the accomplishments between, are the matters and facts here looked at. Looking at these conditions does not in the least appeal to the easily disturbed emotions. On the contrary, a study of that which thirty-five years ago, started, loaded with its tasks; and of that which has now arrived, loaded with the fruits of its scientific labors, brings the steady sobering reflection that all progress of a worthy civilization, is a progress in the face of opposing great problems—is a progress of eternal contention. There must be many apparent defeats!

It is very easy and trite to say that the medicine of any time, is the aggregate medical mind of that particular period. But one cannot go deeper; and the medicine of thirty-five years ago, which is here assumed to have then mobilized its forces and to have made a fresh start, was the summing up of the medical mind of that time. And the summing up of great minds, it was!

The one whose beginning medical life was contemporary with the stress and works of the medical minds of thirty-five years ago, can best appreciate the virile elements of character, that then dominated medicine. In the year 1884, J. Marion Simms had but recently died; and as show in somewhat of the worth, and power, and high character of medicine of those days, the names of the physicians who first subscribed to a fund for the erection of a monument to his memory, are here given: Fordyce Barker; George F. Shrady, Thomas Addis Emmett, T. Gaillard Thomas, William T. Lusk, Paul F. Mundie, S. O. Vander Poel, Frank P. Foster, E. S. Gaillard,

Samuel D. Gross, William Goodell, James R. Chadwick, William H. Byford, A. Reeves Jackson, Thad A. Reamy, C. D. Palmer, George J. Englemann, R. Beverly Cole, H. F. Campbell, R. B. Murray, E. S. Lewis, J. T. Searcy, R. A. Kinloch, Hunter Maguire, S. C. Bussey, Harvey L. Byrd, W. T. Howard, D. Y. Yandell, Seth C. Gordon, Frank E. Beckwith, A. W. Knox, L. W. Oakley, A. T. Woodward, Albert H. Crosby, E. S. Dunster, Alex. J. Stone.

During the year the names of very many more physicians of equal attainments and ability were added to the list. To mention the names of such men, surely is to call the roll of master minds! Such minds grappled with the Nature secrets, which are ever the problems of medicine. After the problem has once been solved, one can see that Nature was all the time doing her best to uncover the secret to men, but that men simply couldn't understand Nature. For instance: Lister had taxed ingenuity to the utmost to devise a spray which would be fine enough so that the droplets would catch and destroy the germs entering the wound made by the surgeon's knife. Sometimes it looked as if he had solved the problem. Soon nearly every surgeon was using a spray of some sort. There were though, enough failures so that those who did not spray could point to results nearly as good. But the days of "laudable pus", were gone forever. A paper entitled, "Antiseptic Surgery at Bellevue" began with the words, "Whether a surgeon believes in the germ theory or not"; but there followed in the paper 12 points in what has been called "sterilization", which gave the patient the benefit of the doubt, and which so far as they went do not read badly to-day.

The Russo-Turkish war and the war in Egypt brought up the discussion of "field" surgery. Lister said: "For a ready dressing old sheeting or other rags may be torn up and soaked in equal parts of sublimate and glycerine and 200 parts of water and then hung up to dry, after which they are ready for use". Because of the light projected by such minds, the clouds of sepsis were becoming a little less opaque! But such dressings didn't always work; and so others used dressings saturated and covered with wax or spermaceti in which had been incorporated salicylic acid, carbolic acid, borax, or eucalyptus. Strifes waged around the use of all such dressings. But no good ever comes without strife!

Speaking of "specific microorganisms in diphtheria" Welch said, "such organisms do exist in diphtheria, but their special characteristics are not known, they have not been satisfactorily isolated by fractional isolation, and inoculation experiments have not yielded uniform and satisfactory results". Kleb's investigations, was a matter of very warm controversy. The charge on the one side of "having the cart before the horse" was met on the other side by the counter charge of "lack of skill and faulty technique". Carpenter gave as exciting cause for diphtheria, "emanations from decaying vegetables". "The materies morbi" he said, "may be a bacillus, microcosm, or a fermentation product"; and adds, "Investigations are sailing on the sea of bacteriaemia with every inch of sail spread". "Ochlesia" or crowd poison was the cause of diphtheria, as Hutton saw it. But as pointed out by George T. Welch, "crowd poison" did not explain the prevalence of the scrouge in the all too much wind admitting dwellings on the plains of Minnesota. Notwithstanding the lack of positive proof of Kleb's theory, medicine in the early part of 1884 had all but adopted the conclusions of George T. Welch who closed his article with the statement that: "Until the germ arrives, the conditions favorable to its development are inoperative".

(To be continued.)

THE MATTER OF SEX IN THE HANDKERCHIEF.

In a very real sense a handkerchief is either radically masculine, or else it is radically feminine. This fact may be contemplated with absolute indifference. Indifference is both physically and mentally restful. Restfulness is don't care. It is no matter. So it comes about that the sex of the handkerchief is discussed here and now because in the time of heated temperatures, when the mind rebels at the task of doing any kind of thinking, it is refreshing to be able to get away from trying to follow the exacting logic of theories, and to just simply sit and indifferently gaze at establishments.

Naturally and of course in such heated periods, matters of no importance present themselves to the stagnant mind as appropriate themes to write about. They come without effort on the part of the writer, and in furnishing the mind with harmless occupation, they prevent otherwise intolerable ennui. No effort is re-

quired in the putting of such thought quieting ideas into words. All around beneficent nothingness, is therefore the other way of putting it. No respite from thinking, would be inevitable mental break-down.

So self evident is the proposition that the handkerchief reveals sex, that there could not be found in any detective bureau in this country a detective, who was so ignoramusly incompetent, that he would not upon finding a handkerchief, instinctively know whether a male or a female had passed that way. The handkerchief would not be a clue. It would be judge, jury, and verdict. A hemmed and stitched piece of linen twenty-four inches square and of a comfortable thickness, means one thing; and a center-piece of gauze three inches square surrounded by lace one and a half inches wide, means something else!

To illustrate: There are public speakers who in the following out of some personal idea of politeness, take from the pocket a nicely clean handkerchief, and then go through the performance of carefully unfolding the handkerchief before their audiences. The practice is a fairly common one, and so the unfurling of a recently laundered handkerchief on the platform does not attract particular attention. Possibly the act passes with less notice than the speaker feels to be its due; but if it should come to pass that through gross carelessness in the first place, the speaker in following habit were to take from his pocket one of his wife's handkerchiefs and automatically unfold it to the view of his audience, he would suddenly be made conscious of the fact that he was publicly parading sex! Contemplating all of which is restful and restorative, because of its obvious matter-of-factness.

Ethno-archeologic researches have not located the period during which the handkerchief first began to differentiate between male and female. Evidently it was long before Schneider's time. Schneider was only looking for the structure from which the handkerchief was evolved. Schneider did not demonstrate any differences between the male and the female Schneiderian membranes. He only found the membrane. Which was easy! That is to say he got through with his investigation very much sooner than would have been the case, had he tried to explain why one Schneiderian membrane called for a much larger handker-

chief, than did another Schneiderian membrane in the same family?

In any heated term—in this heated term to be exact—a man's wife, any man's wife can and does get more comfort out of a diminutive mirror and a puff ball and one corner of a lace handkerchief, than the man can get from any amount of handkerchief mopping up, that he has the strength to perform. To calmly recognize the fact is recuperative.

All of this is about the evolutionary product of the normal male and the normal female Schneiderian membrane. Comes hay-fever and influenza, though and then—well, it is coolingly sedative to know that at least once in a while, femininity is compelled to measure up to masculinity; or, to put it the other way; when the nose and face and eyelids become red and swollen and sore and ugly, then a mirror either little or big, in its disclosures, but adds insult to abomination; no one then dares mention the puff ball; but all are discredited in the time of crisis and tucked away with the gauzed lacery in the handbag. To the restin^o dreamy man there is reviving comfort in the thought that in his wife's being forced to the use of a sizeable dependable common sense handkerchief, masculinity has for once come to its own.

LIMITED LICENSE TO PRACTICE MEDICINE.

The recently held session of the North Carolina State Board of Medical Examiners granted "Two limited license to practice in restricted territory, one to a practitioner of Ashe and one in Graham County." Originally designed to afford some sort of a doctor to an out-of-the-way community, it would appear that the provision of the state medical licensing laws permitting the issuing of license to practice only in a certain county, has, fully served its purpose, if it ever had any real usefulness other than the keeping quiet of some bucolic statesman who perhaps had secured his election to the state legislature for the expressed purpose of seeing that "his people were able to have doctors of their own liking without any state interference." In the years gone by, more than once, has a rejected applicant for license returned to his rural environs and been sent to represent (God save the mark!) his county the following winter. It was to care for just such possible cases that the limited section of our state medical law was enacted.

With the general diffusion of education in every section and county of the state, manifestly the original possible usefulness of such power on the part of the state board has passed, and at present it probably serves but little if any wholesome purpose and its repeal at the next session of our legislature is worthy of the thoughtful consideration of the committee on legislation of the state medical society.

Again it might be advisable to have the attention of solicitors invited to the fact that such "limited license" is only for the specified territory, and the registering of holders of such license in the same verbiage in the county clerk's office as is used in registering ordinary or regular license, is manifestly illegal. It is well to note that as time passes the ambitions of the "limited license" man, may outgrow the narrowed confines of his license, and (as has possibly happened in N. C.), he has boldly carried his county clerk's certificate of registration to another county, and secured registration there as a regular practicing physician.

SAFEGUARD THE WATER SUPPLY.

Instances of infection from polluted water supplies are happily growing fewer every year due chiefly to the taking of greater precautions against the spread of contamination and disease. There is still, however, much room for improvement.

The oldest form of water purification is, of course, simple filtration through filter beds of sand or gravel. In some regions where the watershed is exceptionally free or loose matter and not easily subject to contamination, this is sufficient for the production of good water. In the majority of cases, however, the water contains organism that pass freely through a sand filter or brings down so much sediment that the proper working of the filter is interfered with so that it is the best practice to supplement filtration with some form of chemical treatment. This is always the case when the watershed is situated in a thickly peopled region easily subject to pollution.

The chemicals most commonly used are alum and chlorine. Alum has the property of rapidly precipitating all suspended and semi-soluble matter in the water. As the suspended matter has considerable affinity for the organic mat-

ter which causes pollution, the use of alum also greatly reduces the number of bacteria in the water. The effectiveness of alum may be judged from the fact that as little as one or two grains is sufficient to precipitate the sediment in most waters. The object of the chlorine is to sterilize the water as a further protection against bacteria.

The cost of chemical treatment is so little—hardly a fraction of a cent per gallon of water—that it is not to be considered in connection with a service that affects the health of the community to such an extent that its adequacy is measured in terms of death rate.

To some the use of chemicals in drinking water is, at first, distasteful. It must be realized, however, that fecal matter and the germs of disease present in untreated water are in themselves chemical substances. By chemical treatment we substitute for these deadly organisms the purifying reagents which destroy them.

STANDARDIZATION OF HOSPITALS.

The present activity for standardization of hospitals is indicative of unrest in the medical world. It is the weather-vane pointing the way of progress. This is not an individual effort but a mass movement and bespeaks progress in medical education.

The medical profession no longer tolerates indifference but is moving forward toward accuracy in diagnosis and efficiency in treatment.

The hospital will be required to organize its staff. To keep accurate records of all cases and to provide proper laboratory facility for all necessary examination of patients. The hospital staff will be required to meet as a body at least once each month for review of special hospital cases. The natural result will be that every member of the staff must be alert and wide awake in his work. Incompetency will be suicidal. And unless a staff member is capable and up to a high standard he must necessarily go into the discard. Undoubtedly there are men who oppose such stringent rules in the regulation of the hospital for the greatest good of the patient. As in every great advance there are always some who oppose. They are afraid of innovation and do not realize their own good in the new order of things. They must necessarily be carried along by the force of natural laws until time itself smooths out their worry and

helps fit them to the new condition in which doctoring is a real profession and not merely common business.

DR. ABRAHAM JACOBI.

In the recent passing of Dr. Abraham Jacobi of New York the medical profession has lost one of its brightest and most dependable lights, and civilization one of its consistent promoters. Born a German, educated a German, he yet was possessed of that discerning vision which made him at an early age cast his lot with the people of his native land who believed in the rule of the people and though quite a young man, and just completing his professional education, in the revolution of 1848 he was found casting his lot with Kinkel and Carl Schurz. Later he was one of Germany's good citizens who found safety from the persecutions of the dominant aristocracy in exile to America.

Once in America Dr. Jacobi embraced to the fullest extent the principles of democracy as exemplified by our government, always duly appreciative to the end of his long and active life of the refuge afforded him by the United States, and always mindful of the duty he owed his adopted land in seeking to live by her ideals. Such was Jacobi, a conservative thoughtful man who loved liberty and despised its perversions so often striven for by foreigners who have sought a refuge and opportunity in our land. No anarchistic spirit was his, but a devoted consistent promoter of the finer concepts of America as visualized by the founders of the republic.

In his profession he attained deserved eminence, and for many years he was America's first authority on paediatrics, a teacher of medicine whose fame was world-wide, a consultant whose pronouncements were final, and withal a real man whom it was a pleasure to know.

As illustrative of his attained position in American medicine the tender a number of years ago of a professorship in the University of Berlin could be cited, along with the presidency of the A. M. A. and numerous other distinctions which came to him in the course of his busy career.

The call to the leading University of his native land must indeed have appealed to his pride, but unlike the distinguished British subject who some years ago after justly attaining world-wide fame as a teacher of clinical medicine, gladly accepted an offer of a professorship in an

overseas university and turned his back on the land where he had achieved success. Jacobi had drank deeply of the spirit of America and her institutions, and the call was declined.

Again when the war began in 1914 Jacobi gave unfailing support to the cause of the Allies, remaining steadfast a supporter of the political principles he had espoused when a student at the university in Bonn, and to the last an unswerving adherent of democracy as opposed to Prussian militarism and autocracy. Undoubtedly this cost him many friendships among other Americans of Teutonic birth, but the support of the Grand Old Man to the principles he espoused in youth was firm and unyielding from the very outbreak of the war with Germany.

When America, his adopted country, entered the war, Jacobi's enthusiasm knew no bounds, and the picture of earnest active concern manifested in his face as he sat on the rostrum in the Hippodrome at the great "Preparedness Meeting" of the A. M. A. in New York City a few days after the United States formally declared war on Germany, will ever remain in the mind of the writer, a pleasing delight and a patriotic inspiration.

As was truly said by one of the N. Y. dailies, "there was no hyphen in Dr. Jacobi's rugged Americanism."

J. H. W.

THE NEWSPAPER HABIT.

Of all the bad habits a doctor is liable to form the newspaper habit is perhaps the most injurious to him from the financial standpoint. Like other bad habits, it is difficult to break, once it has taken a firm grip on the individual.

Unfortunately this habit is widespread and especially prevalent among men of the medical profession who are not busy professionally. It is insidious in its growth and gradually consumes more and more of the doctor's time, whereas he may have been a close student in his profession. Gradually he falls into the habit of reading newspapers more and his Medical Journals less. Consequently he neglects his medical studies and in the course of time he finds it difficult to concentrate his mind on any professional subject, but will take up a newspaper with avidity, pouring over every item with close attention even though the subject matter may be of no importance or benefit to him. He will spend precious

time reading the morning paper and is equally ready to peruse the noon-day extra, and still not satiated, he applies himself eagerly to the reading of the evening paper.

The constant reaching out for the latest news is in reality a fleeting "Will of the Wisp" that always eludes the grasp and only draws one deeper into the quagmire of medical ignorance. The doctor so afflicted not only forgets to apply himself to the study of medicine but he falls into the habit of not attending medical meetings and even fails to associate with his friends, as formerly. At bed time he retires fagged and worn by the constant demand of the newspaper, only to begin the following day in the same manner a slave to this consuming habit.

And so time passes. The doctor addicted to this time consuming habit gradually falls behind in his medical knowledge, and if he ever again realizes his mistake, he awakes to the fact that he has become a back number in the profession; a laggard in his work.

The Relief Of Functional Depression.

The conditions under which the majority of people have lived during the past few years have led to widespread nervous depression and debility. Overwork, worry and restricted or changed diets have all tended to cause derangement of bodily functions. To correct and overcome these conditions of general weakness and debility, vigorous tonic treatment is invariably needed, and for this purpose there is no remedy that will be found more promptly and uniformly effective than Gray's Glycerine Tonic Comp.

Under its systematic use, combined good food and hygienic care, the digestion is improved, the nutrition is aided and promoted and the vitality of the whole body raised substantially. The nervous and mental condition of these weakened and debilitated patients shows a gratifying improvement in every way, and in what is often a suprisingly short time they regain their strength and vitality, with complete relief from their systemic depression and loss of bodily energy.

The use of Gray's Tonic Comp., together with painstaking regulation of the hygiene and diet has undoubtedly saved many of these cases of nervous depression from developing into graver ills.

EDITORIAL NEWS ITEMS

The proposed Gaston County Hospital. There seems to be a plausible and enthusiastic sentiment to establish a city and county hospital to be located at Gastonia, N. C. We have some of the best physicians and surgeons in North Carolina in Gaston County and Gastonia and no doubt that a hospital established there and run on business principles would be a great success. We understand that Dr. L. N. Glenn is already constructing a private hospital for himself and patients which is a wise thing for a competent surgeon to do. We predict that he will make a success with his enterprise and we believe that he will.

Winston-Salem is soon to have one of the best hospitals in the state. The will of the late R. J. Reynolds provided that \$240,000 be appropriated to the city hospital for improvement. We understand that Mrs. Reynolds is also interested in this hospital and will make substantial donations to it from time to time. In the late Mr. Reynolds' will provision is made for a five-story fire proof building.

Dr. Robert Ferguson of Gaffney, S. C., has announced that he is to build a private hospital in that city to be known as "Dr. Ferguson's Private Sanatorium." Dr. Ferguson proposes to limit his practice to general surgery which will include orthopedic surgery. The doctor has recently returned from Europe where he spent over two years.

Drs. J. T. Hoggard and J. F. Miller of Wilmington, N. C., have purchased property for the purpose of building a modern hospital which is to be known as the Wilmington Hospital. The announcement states that while it is a private institution it will be open to any practicing physician who wants to use it. The building is to have 50 rooms each with a private bath. The specification calls for a fire-proof building.

Dr. John Kennedy of Due West, S. C. was recently discharged from the military service and has located in Charlotte, N. C. He will be associated with Dr. George W. Pressly, the well known surgeon of Charlotte. Dr. Kennedy is a well educated professional gentleman and has had good training. He graduated from the Jefferson Medical College of Philadelphia in 1915. We understand that he is to limit his practice to surgery.

Dr. F. M. Register, who has been health officer of Northampton County for two years, has resigned, to accept the position as Chief of Bureau of Epidemiology, with the State Board of Health.

Dr. Charles A. Mobley, formerly of Rock Hill, S. C., and who formerly served as assistant surgeon at the Fennell infirmary of that city has removed to Orangeburg, S. C. It is understood that he has made arrangements to open a first class hospital in that town. The plant to be known as the Orangeburg Hospital.

Dr. Southgate Leigh of Norfolk, Va., was some time ago elected chief surgeon of the Virginia Railway Co. Dr. Leigh is one of the most prominent surgeons of this country and his selection to that position was an evidence of the good judgment on the part of the officials of that Railway Co.

Dr. T. C. Bost, formerly of Chester, S. C., has recently located in Charlotte, N. C., and will limit his practice to surgery. Dr. Bost received his medical training in Washington, D. C., and also studied in Europe. He was chief surgeon in a Base Hospital in London for quite a while and also held a similar position in Dartford, England. There is no doubt that Dr. Bost is thoroughly competent and deserves the confidence and liberal patronage of the people of this city and surrounding country.

Dr. H. L. Cook announces that he has located in Fayetteville, N. C., for the practice of medicine. He will be associated with Dr. R. L. Pittman.

Dr. W. T. Shaver, a native of Salisbury, who has been for the last two years resident gynecologist in the Maryland general hospital in Baltimore has located at Spencer, N. C. He received his literary education at the University of North Carolina, and his medical training at the University of Maryland. We predict for him a success in his new location.

Dr. John Thames, formerly of Winston-Salem, N. C., has recently accepted a position as health officer of Little Rock, Arkansas. Dr. Thames served two years as captain in the Medical Corps of the army and was highly recommended to Mayor Brickhouse by Surgeon General of the United States Marine Hospital and Public Health Service at Washington, D. C. He was born near Fayetteville, N. C., and is a graduate of the University of North Carolina and al-

so a graduate of medicine at the Louisville Medical College, Louisville, Ky. Dr. Thames has taken several post-graduate courses in Philadelphia and Baltimore and has been a member of the North Carolina State Medical Society since 1895.

Dr. Edwin Guy McMillan will in the very near future, begin the practice of medicine in Maxton, N. C. He is a graduate of Toulane University and has recently obtained his license from the State Board of Examiners for the practice of medicine. We wish Dr. McMillan a brilliant and successful career in his new field of work.

Dr. E. R. Hardin of Clinton County, N. C., has recently been elected county health officer in Robinson County succeeding Dr. W. A. McPhaul. He is a graduate of the University of Georgia, and has had three years experience in a hospital in New York City, and was county health officer in Sampson county for two years. Dr. Hardin has served two years as captain in the army and has also had two years experience with the Health Department before going into service. Dr. Hardin is well qualified for this work and we predict for him a great success.

Mr. and Mrs. Norman Robertson announce the marriage of their daughter, Ruth Isabel, to Doctor Stuart McGuire on Tuesday, August the twelfth, nineteen hundred and nineteen, Walkerton, Ontario.

The above announcement will be read with interest by the many friends and admirers of the South's great surgeon who cordially join the editor and readers of The Journal in wishing Dr. McGuire and his bride every happiness.

PRACTICAL WORKINGS OF COUNCILOR SYSTEM IN N. C.

Norfolk, Va., June 17, 1919.

To the Editor:—Attending the recent meeting of the North Carolina State Society at Pinehurst, as fraternal delegate from Virginia, I was deeply impressed with the evidences seen on every hand, of the splendid system of organization, which appears to exist in that society.

The meeting was most successful and delightful. The papers read were of high standard, and the discussions prolonged and thorough.

I felt it might be a good plan to bring back to the members of the Virginia Society some message which might be helpful to us. The success of the plan in North Carolina seems to depend on the

splendid work of the individual councilors. I requested Dr. Way, President of the State Board of Health, a very eminent practitioner in North Carolina, and one well known to the profession in Virginia, to write me a letter to publish in our Journal. I take the liberty of enclosing this.

Very truly yours,
SOUTHGATE LEIGH.

Waynesville, N. C.,
April 28, 1919.

My Dear Doctor Leigh:—

Yours of late making inquiry as to the practical workings of the Councilor system in the State Medical Society of North Carolina received. In reply I beg to advise that in actual practice it works finely, especially when a really capable man is made district councilor. It depends much on getting as councilor a physician of sufficient known professional standing as to be regarded with respect by the county societies he visits. Of course it requires both time and expense to make the visits to the counties, but it develops a fine spirit in the local profession, and the contact with the men of his district, their knowing him better, is in no wise a professional hindrance to the councilor who advisedly should be located in some of the larger cities available to all the counties of his district.

The councilor should also be a man willing to do the service for the profession, and a hearty believer in the good to be accomplished by keeping the men of our profession lined up in accord with the best ideals of the profession. Harking back to the days of 1902, and the status quo of things medical in that period prior to the "re-organization" of the American medical profession, I am sure that any doctor conversant with conditions then and now, could not possibly desire a return to the unorganization of that day.

And yet until we have county societies holding regular meetings in the large majority of all the counties of a given state, we shall not have reached the full measure of benefits to accrue from the carrying out of the plan.

But why tell you of this? You came to the recent session of the North Carolina State Medical Society at Pinehurst, and you saw no less than four sections meeting simultaneously with full attendance in each hall; you witnessed the crowded auditorium at the general meetings of the Society, you noted the more than four hundred "tar-heel" doctors reg-

BOOK NOTICES

istered; you heard the fine papers, and listened to the keen, snappy discussions. Our State is without the big commercial and medical centers such as some of our sister States have (fortunately or unfortunately, I'm not quite sure), hence no county society in the State may have so large a membership as some of your counties, and yet our average is fine. The esprit de corps of the Carolina profession is of the finest, and we attribute very much of it to the influence of good county medical societies.

A strong active councilor can help develop good county societies as no other possible influence. I regard the councilor's position as the one fraught with the larger limit of capacity to serve the local profession of a given section, and in no position in the State Society can the doctor of ability and purpose quite so well advance the interests of the masses of the profession.

I thank you for writing me, and I trust the Old Dominion, so often the proud leader in so many of the best things, is developing the county societies under the leadership of strong, willing councilors.

—Virginia Medical Monthly
JOSEPH H. WAY,
Lt. Col. M. R. C. U. S. A.

A generation or more ago, the sentiment of the medical profession was in favor of descriptive names of ethical remedial agents; the opinion prevailed that names indicative of the composition of pharmaceutical agents offered ample protection against confusion. It was in conformity with this sentiment that Glyco-Heroin was selected as the most appropriate name for what has come to be one of the most universally esteemed respiratory sedatives.

But experience ultimately proved that the non-descriptive appellation affords a much greater measure of protection against confusion. Accordingly, Glykeron was selected as an alternative name for this preparation.

Glykeron and Glyco-Heroin now being synonymous appellations, and familiar as such to all dispensing pharmacists, the physician may use these names interchangeably when prescribing what was originally known only as Glyco-Heroin (Smith). Since Glykeron is the more distinctive appellation, its use is suggested to physicians when prescribing this well-known preparation for cough, bronchitis, pneumonia, phthisis, whooping-cough and kindred affections of the respiratory system.

"Experiments in Psychical Science" levitation, contract, and the direct voice by W. J. Crawford, D. Sc., lecturer in mechanical engineering, the municipal technical institute, Belfast; extramural lecturer in mechanical engineering, Queen's University of Belfast. Author of "The Reality of Psychic Phenomena, etc. Price \$2.00. New York, E. P. Dutton & Co., 681 Fifth Ave.

Continuing his important investigations into the nature, size and direction of the forces displayed in Levitation and other Psychic Phenomena, Dr. Crawford tabulates in this volume the results obtained during the years 1916 and 1917 in the Goligher circle and elsewhere.

Besides entirely confirming the conclusions given to the world in the reality of psychic phenomena, his later results throw new light on methods and on the nature of the force employed, and may even be considered to herald new ideas on the constitution of matter.

Entirely complete in itself, though continuing the line of experimentation first described in the reality of psychic phenomena, this volume is valuable, apart from the extraordinary interest of its subject, from the sanity of its mental outlook and the accuracy and thoroughness with which the methods of physical science have been used for the time with success in a line of investigation leading straight into the territory of the psychical.

Dr. Crawford has for a number of years made a special study of this subject and he is a very clear and logical writer. Any one who is interested in this kind of science would do well to read the book. It has 201 pages with a good many illustrations.

"What America Did," a record of achievement in the prosecution of the war by Florence Finch Kelly. Profusely Illustrated by photographs of actual scenes of Government Activity. Price \$2.00. E. P. Dutton & Co., New York.

An Everybody's book about the war. In concise, graphic chapters is told the story of how the army was formed, housed, trained, fed, munitioned, sent overseas, and what it did there; how the navy expanded, gave service on sea and land, ran an ocean ferry; how a great aircraft program was developed out of nothing; how the war was financed, the railroads run, the country organized, the nations

fed, the United States made leader in the world's shipbuilding; how the underground enemy was fought, what women did for the war, how the nation big-brothered its fighting men, how the Red Cross grew and what it accomplished; of every phase, in short, of America's war effort.

Just the comprehensive and authoritative account of America's part in the war that everybody need and wants.

The numerous illustrations are very appropriate and many of them are very beautiful. The book has 343 pages and is worthy of careful reading and no doubt will be well received throughout the country.

"Blood and Sand," a novel by Vicente Blasco Ibanez translated from Spanish by Mrs. W. A. Gillespie. Authorized American edition. Price \$1.90. New York, E. P. Dutton & Co., 681 Fifth Ave.

This was the first of Ibanez' novels to bring him world wide recognition. It deals with the "cherished atrocity of Spain—the bull-ring. The hero is a renowned torrero who has longed to be a bull-fighter from his boyhood, and we are throughout in the very atmosphere of bull-fighting and bull-fighters, while the actual scenes in the arena are of almost terrible force. No detail of the picture is spared, everything passes as in the reader's very sight. One can see, and almost hear and smell the actual battle of the bull-ring.

The book has been pronounced a master piece. It is full of interest from beginning to end. It contains 356 pages and makes a nice volume.

"La Bodega" (The Fruit of the Vine). A novel by Vicente Blasco Ibanez translated by Dr. Isaac Goldberg. Authorized American Edition. Price \$.90. New York, E. P. Dutton & Co., 681 Fifth Avenue.

In this remarkable novel Blasco Ibanez, who never spares his countryman's failings, draws an intense and brilliant picture of the effect on the workers of Spain of the national traffic in wine.

Here, in a story of love and struggle, jealousy and vengeance, we follow the lives and fortunes of the country peasantry of the vineyards as well as of the town-workers in the factories, their attempts to resist the tyranny of the capitalists and their frustrated plan of general revolt.

This is, in fact, a book rich in atmosphere and color and throbbing with action; it is generally rated among the author's best works, even higher than the *Shadow of the Cathedral*.

This is a very interesting book of 368 pages, and any one who likes this kind of literature will be much pleased with it.

"The Surgery of Oral Diseases and Malformations," their diagnosis and treatment by George Van Ingen Brown, D. D. S., M. D., C. M., F. A. C. S. Major medical officers' reserve corps, U. S. Army. Oral surgeon to St. Mary's hospital and to the children's free hospital and Columbia hospital, Milwaukee; fellow of the American Medical Association; member of the national dental association, chairman of the section on oral surgery of the fourth international dental congress, etc. Third edition with 570 engravings and 20 plates and a selected list of examination questions. Price \$7.00. Lea & Febiger, publishers, Philadelphia, Pa.

In the preparation of this work the author has endeavored to meet certain demands the urgency of which has been borne in upon his mind after more than thirty years' experience in the treatment of oral diseases and malformations. During the last ten years of this period his practice has been limited to these affections. Through frequent consultations and co-operation in the treatment of patients who have been referred, he has been closely in touch with dentists, general surgeons, internists and those whose practices have been limited to rhinology, ophthalmology, otology, pediatry, dermatology and other divisions of medical practice. This volume is therefore designed to be a book of reference touching all these medical interests in their oral relation.

As a teacher of oral surgery he has also become convinced that for many reasons there is great need of a text-book adapted to both didactic and recitatorial instruction on this subject, sufficiently concise and well systematized to permit of accommodation of the course to the stringent time limitations of a college curriculum and yet impressing the salient points to the best possible advantage, and so arranged as to facilitate the work of students in preparing themselves for examination. While meeting these requirements it is believed that this work is sufficiently comprehensive and practical to make it a useful guide in trying clinical

situations after graduation.

The chapters on Harelip and Cleft Palate represent the chief part of the author's life work. His conception of the presentation of the subject is based upon extended observation of the confusing conditions which surround those who are called upon to treat such cases in the course of general practice. There is much diversity of opinion among writers as to the best methods of procedure, and the ill results of a wrong step in treatment are great and long continued. The clinical aspect has been kept constantly in view in order to provide a dependable source of information. Many original drawings have been carefully prepared to show each operative step in the correction of these deformities. Much space has been given to the explanation of operative methods and the underlying factors which influence results. The pictures of large numbers of patients are shown in order to emphasize the thoroughly practical clinical value of operations and corrective measures that are commended. These are in the form of engravings made from photographs. They are therefore true examples of the results of treatment which is in harmony with the developmental principles that govern facial symmetry, speech function and nasal form. Upon these influences also depend freedom from nasal disease and other more widely distributed affections, both general and local. All illustrations except those credited to other writers are representations of the author's cases.

The book contains 734 pages and is strongly and handsomely bound. The 570 illustrations are very complete and very appropriate. As it occurs to the reviewer a man who does general surgery could hardly afford to be without this book. It seems to be very thorough in every respect. Dr. Brown writes well and the general classification of the book seems to be as perfect as it is possible.

"1918 Collected Papers of the Mayo Clinic, Rochester, Minn." Octave of 1196 pages, 442 illustrations. Philadelphia, and London: W. B. Saunders Company, 1919. Cloth \$8.50. W. B. Saunders Company, Philadelphia and London.

This is a wonderful volume of 1196 pages carefully indexed and magnificently illustrated.

The following are the contributors to the volume all connected with the Mayo Clinic: Dr. A. W. Adson, Dr. D. C. Bal-

four, Dr. R. A. Barlow, Dr. R. H. Blackman, Dr. W. F. Braasch, Dr. A. C. Broders, Dr. R. O. Brown, Dr. R. D. Carman, Dr. H. M. Conner, Dr. J. L. Crenshaw, Dr. W. G. Crumley, Dr. Willa M. Davis, Dr. G. B. Eusterman, Dr. H. Z. Giffin, Dr. W. H. Goeckermann, Dr. S. W. Harrington, Dr. C. A. Hedblom, Dr. M. S. Henderson, Dr. C. V. Hunt, Dr. E. S. Judd, Dr. E. C. Kendall, Dr. W. S. Lemon, Dr. G. G. Little, Dr. A. H. Logan, Dr. Georgine Luden, Dr. W. C. MacCarty, Dr. F. C. Mann, Dr. J. C. Masson, Dr. C. H. Mayo, Dr. W. J. Mayo, Dr. H. W. Meyerding, Dr. G. B. New, Dr. F. A. Olsen, Dr. J. deJ. Pemberton, Dr. A. Peterson, Dr. W. A. Plummer, Dr. E. C. Rose now, Dr. A. H. Sanford, Dr. W. E. Sistrunk, Dr. Leda J. Stacy, Dr. J. H. Stokes, Dr. E. H. Weld, Dr. R. Taylor, Dr. G. W. Wheeler, Dr. F. A. Willis, Dr. H. W. Woltmann.

Mrs. H. M. Mellish is editor of the volume and she certainly has done her work well.

"The Gay-Donbeys," a novel by Sir Harry Johnston author of "The Uganda Protectorate," "The Negro in the New World," "A History of the Colonization of Africa," Etc., Etc., with a preface by H. G. Wells. Price \$2.00. New York; The MacMillan Co.

"Sir Harry has to tell of very curious and intricate realities; he knows as thoroughly as any living man can know, the intimacies of that queer system in which court, foreign office, colonial office, family influence, financial powers, shippings firms, casual adventurers, inspired journalists, and the encounters of the London dinner tables and English week-end parties played their parts in the expansion and administration of the Empire of Queen Victoria. It is a world with whose exterior assumptions our distinguished contemporary, Mrs. Humphry Wars, writing from the woman's point of view and with a certain romancing touch, has familiarized two continents; but Sir Harry has lived the life, and so far from his laxities impairing his final effects, the easy carelessness of his presentation adds enormously to our final conviction of the truths in his picture . . . There is sheer fun for its own sake in this book, there are vivid passages and startling allusions to real people. It grows together because it is a real story built up of real experiences, and warm (and sometimes hot) with passionate feeling.

The volume contains 397 pages and is

handsomely gotten up. It is a splendid novel and will interest any one.

"A Manual of Canning and Preserving," by Theodora M. Carrell. Price \$1.25. New York, E. P. Dutton & Co., 681 Fifth Avenue.

The author has had many years of experience in canning and preserving both for family use and in a public laboratory kitchen, and in this little volume has brought together all the recipes and general information on the subject which she has thoroughly tested out and found to be valuable.

Jellies, Jams, Canned Fruits, Canned Vegetables, Marmalades, Pickles, Conserve, Fruit Juices and Preserved Fruit are among the subjects of which the author treats, and about which she has collected in convenient form all the material the housewife will find necessary for this pleasant and important branch of the art of cooking.

This little book contains 101 pages and is very well written indeed. It ought to be in the hands of every one who is interested in the subject of canning and preserving.

"The Undying Fire" a contemporary novel by H. G. Wells. Price \$1.50. New York, The MacMillan Co.

Mr. Wells has taken a great spiritual conflict as the theme of his novel. This he has made vivid and compelling through characters drawn with his usual penetration and insight and through incidents of a highly dramatic nature.

Job Huss is as commanding a figure as has appeared in any of the author's books. Unreasoned faith and agnosticism alike fail to move him; and in the end, like Job of old, he is rewarded.

Man must fight and move forward because there is some God-given thing in his heart that impels him—this is Mr. Wells' message back of his story.

The book contains 229 pages. It has no illustrations. It is divided into seven chapters, as follows: The Prologue in Heaven, At Sea View, Sundering-on-sea, The Three Visitors, Do We Truly Die? Elihu Reproves Job, The Operation, Letters and a Telegram.

"From Father to Son," by Mary S. Watts author of "Nathan Burke," "The Rise of Jennie Cushing," etc. Price \$1.75. New York, The MacMillan Co.

This new novel by Mrs. Watts presents a young man of wealthy family, who, up-

on entering his father's office after leaving college, finds that the huge fortune founded by his grandfather was mainly made by profiteering during the Civil War. The question is: What is he to do? High minded and sensitive, the problem is a very real and difficult one and out of it comes the story. It is as fascinating in every way as anything Mrs. Watts has ever written and involves a moving crowd of characters drawn with her customary skill and insight into human motive.

Mrs. Watts certainly writes interestingly. Her writings have always seemed to be very acceptable to the novel reader and this one, no doubt will be more popular than any one of her former writings. The book contains 310 pages and bound with cloth.

Hydrogen Peroxide and Phenol; a New, Method of Differential Diagnosis.

In commenting on Soresi's recent experiences with phenol applications, Dr. A. Perez Miro, Professor of Therapeutics in the University of Havana, Cuba, describes a new method of differential diagnosis, which he has successfully employed during the past eight years (Journal American Medical Association, June 14th, 1919, p. 1785), for determining the presence of pathological alterations in the submucous or subepidermic tissues.

Most physicians are familiar with the use of liquid crystallizable phenol (full strength) by application in handling surface infections, ingrowing toenails, furuncles, acne, ulcerations or infection of the hysterovaginal folds. The phenol produces a whitish spot, or line which soon becomes analgesic.

Miro has found that if this blanched tissue is touched with undiluted hydrogen peroxide (Dioxogen is to be preferred because of its purity and strength), it will not disappear if the tissues are normal; but if the submucous or sub-epidermic tissues have suffered pathologic alterations, the white spot or line will darken until it becomes black, and the nearer to the surface the affected tissues lie the darker it will become. This black spot is in reality a scar which can be opened slowly, since it is obtunded by the phenol, and the incision will invariably lead to the underlying pus-pocket or pathological tissues. Miro considers this a splendid method of differential diagnosis, prognosis and treatment.

Thus if a Volpeau's syphilitic chancre, healed in the "Shirt-button" way, is submitted to this test and the white stain be-

comes grayish and studded with darker spots, the indications are that some abnormal tissues still persist. The test application will usually result in the disappearance of the false healing membrane in a day or two and a hollow with a hard rim will result. The treatment is then repeated every 24 hours until all the hardness disappears and true healing takes place.

Miro handles suppurating bubos in a similar manner. The most prominent part of the bubo is first touched with phenol. Peroxide of hydrogen (Dioxogen preferably) should then be applied and if the diagnostic black lines appears it is incised, the pus emptied and after drying the cavity is packed with two tampons of cotton, one moistened with phenol, the other soaked with Dioxogen. This procedure cleanses the cavity better than the curet and without pain, hemorrhage or microbial growth. The same method is also applicable to furuncles, gummas, ulcerations, gum abscesses, suppurating hematomas and tonsillar abscesses.

A Vertible Prop

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always

desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e. the blood itself. To construct new red cells, and reconstruct those which have become de-hemoglobinized by disease nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to reconstruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

Sleeplessness. — Peacock's Bromides bring about sleep in a natural manner, that is, by producing a physiologic cerebral anaemia. This well-known preparation is safe as well as effective and the administration of two to four teaspoonfuls an hour or two before going to bed will produce a sound, restful sleep, from which a patient will awaken refreshed, rested and entirely free from the depression and ill effects so common to other hypnotics. Peacock's Bromides do not disturb the stomach nor induce a habit.

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No. 4

BONE, FASCIA, AND FAT GRAFTING—PART II.

By Addison G. Brenizer, M. D., Charlotte, N. C.

Continuation of Part I. appearing in the same Journal, the past month, September, 1919.

Case X: * Figs. 21, 22, 23. In Fig. 21 is seen an X-ray of a tuberculous necrosis of the last lumbar vertebra and sacrum in a woman 37 years old, with considerable lordosis, slight scoliosis and a sprung sacro-iliac joint. Fig. 22 shows a graft into the lumbar spinous processes and one across the sacro-iliac joint. Fig. 23 is a diagram showing how these grafts are laid.

Case XI: A young man, 12 years old, with tuberculous spine in lower lumbar region, with kyphosis and pressure on spinal nerves. A nine-inch graft from the left tibia was made into the lumbar spinous processes. The patient has been working on the farm and ploughing for the last two years.

Case XII: Fig. 24. Case of spina bifida, where laminae and transverse processes were split and crossed for covering spine.



Fig. 21. Case X—Tuberculous necrosis of last lumbar vertebra and sacrum, with lordosis, scoliosis, and spread sacro-iliac joint (Brenizer).



Fig. 22. Case X—Graft into lumbar spinous processes and across sacro-iliac joint (After Albee).

Fig. 25 shows how the measurement is made on the tibia, where the graft is taken, whether to be grafted into the spinous processes or a long bone. Fig. 26 shows how the graft is cut, first with twin circular saws and then finished with a single circular saw, driven by an electric motor. Fig. 27 is the graft being raised from its bed with a chisel blade and a tap of the hammer. Fig. 28 shows the bed prepared in the fractured bone for the reception of the graft and holes being drilled for ties of kangaroo tendon or narrow strips of fascia, to hold the graft in place. Fig. 29 shows the drill holes being threatened with ligatures to be tied over the graft. In the case of a long bone, the bed is so made for the graft; in the case of the spine, the spinous or transverse processes are split for the reception of the graft. The graft is fixed in the spinous or transverse processes by ties through the inter-spinous ligaments.

Fig. 30 is a diagram, illustrating a sliding graft in the fractured bone itself and how the graft is tied or pegged in place. The graft is cut with a twin circular saw above and below and across the fracture line, the long arm of the graft, when cut,

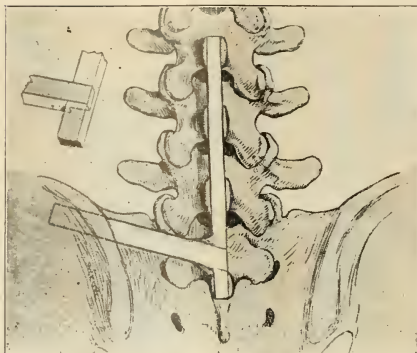


Fig. 23. Case X—Diagram of how lumbar and sacro-iliac graft are done (After Albee).

is turned around and placed across the fracture line and the short arm is used to fill out the defect left by shifting the long arm across the fracture line. In this way, it is not necessary to go elsewhere for the grafted bone, the defect is filled, the fracture line supported and no bone wasted. Fig. 31 is another diagram illustrating how a graft may be cut with a shoulder for bridging a gap of loss of substance in the bone; in this instance the graft would have to be taken from elsewhere, from the other tibia.



Fig. 24. Case XII—Spina bifida laminae and transverse processes split and crossed over middle line to fill defect. (Brenizer).

Case XIII: Figs. 32, 33, 34, 35. Fig. 32 shows the setting in plaster of a compound fracture of both bones of the forearm. Fig. 33 shows the same arm rebroken while still in the plaster cast. This happened while the patient was riding a mule along the side of a hill; the mule fell and rolled over on his arm. One callus held, the other broke and one of the bones was fractured in still a third place. Fig. 34 shows a sliding graft in the radius four weeks after the grafting. Fig. 35 shows the same graft after ten weeks. The arm is quite strong and a remarkable shaping and straightening of both bones is to be observed. The man has a perfectly functioning arm.

Case XIV: Figs. 36, 37, 38. A boy with old fracture of the femur and marked deformity. Fig. 36 the boy's leg; Fig. 37 the X-ray of the bone and Fig. 38 the leg in a long plaster spica, after an intra-medullary bone graft.

Case XV: Fig. 39, X-ray of fracture of the femur, above knee, redressed with intra-medullary bone graft.

Case XVI: Figs. 40, 41, 42. Case of fracture of the neck of the femur, with marked delayed union or non-union. Fig. 40 a bone peg driven below trochanter into the neck and head of the femur with union. Fig. 41 shows the man with the thigh straight and extended; Fig. 42 shows the thigh in extreme flexion. The man walks well, without a limp.

Case XVII: A boy 13 years old, coxa vara, with marked elevation of the left pelvis and scoliosis. A bone wedge taken out, just below the great trochanter of the femur, the lower fragment brought into position with the upper fragment and tied,



Fig 25—Shows how measurement is made on tibia, where graft is taken to fit site to be grafted (After Albee).

Coxa vara and scoliosis corrected. The boy is straight and walking without a limp for seven years.

Fig. 43 is a diagram of Albee's operation for the correction of congenital and habitual acquired dislocation of the hip joint.

Case VXIII: Fig. 44. Club feet, corrected according to the old style of sectioning the plantar fascia and taking a wedge of bone from the outer side of the foot, a combination of the Phelps and Farabeuf operation. These feet turned out short, scarred and stiff. I once considered this a good operation.

Case XIX: Figs. 45, 46. Case of a little girl who had paralytic club foot on the right side, corrected by lengthening the tendo-Achilles and spreading the scaph-

oid bone with a bone graft. The brace, turning the foot, after the plaster is removed, in the direction of a flat foot. Fig. 46 is a diagram showing how the scaphoid bone is spread by a graft. In this way the deformity is corrected, held corrected and the full length of the foot is gained. In the case of exaggerated flat foot, the scaphoid bone may be hollowed out and closed, in this way correcting the foot; just the opposite of club foot correction.

Fig. 47 is an illustration of a resection of the upper end of the tibia in the knee joint and Fig. 48 demonstrates the method of covering the resected end of the bone with pedicled fascial flaps, cut from the capsule of the knee joint; John B. Murphy's operation. The fascia and fat need not be pedicled and attached but

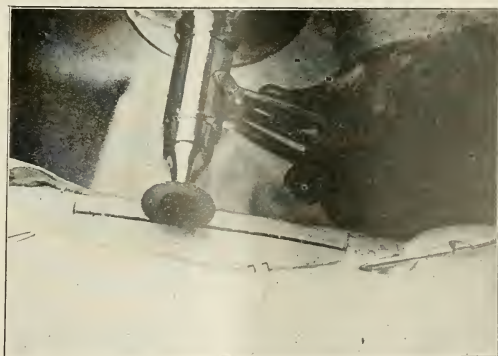


Fig. 26—The graft being cut, first with twin saws and with single saw (After Albee).

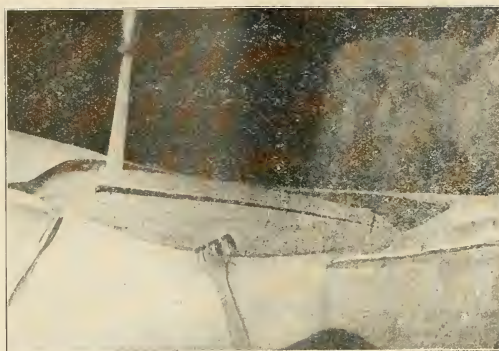


Fig. 27—Graft being lifted from bed by chisel and tap of hammer. (After Albee).

may be cut free from the fascia lata.

Case XX: Figs. 49, 50. The two figures are X-rays of a resected elbow joint. The joint was tuberculous and ankylosed in partial flexion. Both humerus, radius and ulna were resected, with interposition of fascia with fat. The illustrations show the arm extended and flexed and the amount of motion possible.

Case XXI: Figs. 51, 52. This case of tuberculosis of the hip joint was fixed and ankylosed in flexion and internal rotation. The head of the femur was resected, the acetabulum reamed out and fascia with fat interposed. The illustrations show the thigh in extension and flexion and the amount of motion possible. The patient walks well and has done hard labor for the last five years.

Case XXII: Fig. 53. Another case of a resection of an ankylosed tuberculous hip joint, with interposition of fascia and fat. Amount of flexion shown. The young girl has been walking for four years.

Case XXIII: Gun shot wound causing ablation of soft parts and muscle and tendon, including part of belly of the calf muscles and the tendo-Achilles down to its insertion in the os calcis. A large piece of fascia, taken from the fascia lata, was grafted to replace the lost muscle and tendon Achilles. The wound was closed by secondary suture and skin graft. This soldier offered such good function that he was returned to line duty. The movements of the foot were really delicate.

Case XXIV: Figs. 54, 55. So called

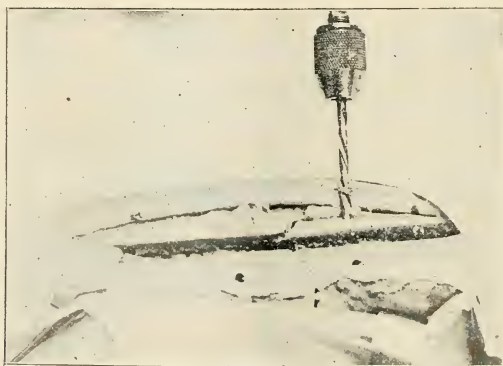


Fig. 28—Bed prepared in fractured bone for reception of graft. Holes being drilled for ligatures. (After Albee).

bunion. The X-ray plates are taken from two cases of hallus valgus, the one shown in Fig. 54 before the operation and the two feet of the other case, in Fig. 55, after the operation. The metatarso-phalangeal joints of the great toes were resected and

pedicled fascial flaps interposed across the resected ends—Mayo's operation. The shape of the feet, the motion in the joints, weight bearing and total function are excellent.

609 North College Street.



Fig. 29.—Holes threaded with ties for holding graft in place. (After Albee).

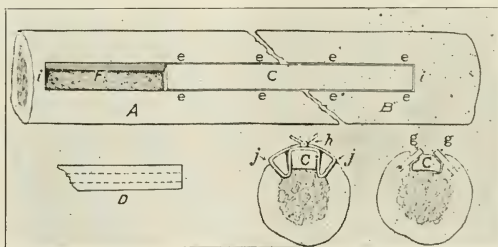


Fig. 30.—Sliding graft, sutures and bone pegs. (After Albee).

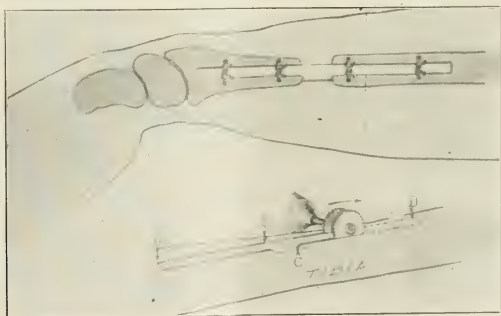


Fig. 31.—Graft cut with a shoulder to span breach of loss of bone substance. Graft from tibia into radius. (After Albee).

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Fig. 32. Case XIII—Compound fracture of both bones of forearm, set in plaster. (Brenizer).

Fig. 34. Case XIII. Sliding Graft in radius, after four weeks. (Brenizer).



Fig. 33. Case XIII—Arm refractured through one callus and other bone in three places. (Brenizer).

Fig. 35. Case XIII—Sliding graft in radius after ten weeks. (Brenizer).



Fig. 36. Case XIV—Fracture of femur, with marked deformity. (Brenizer).

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Funke: Same as 3, page 257.

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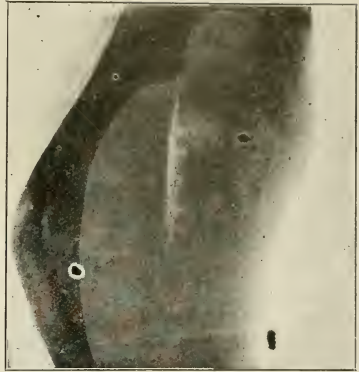


Fig. 37. Case XIV.—X-ray showing bone deformity. (Brenizer).



Fig. 39. Case XV.—Fracture above knee redressed with intra-medullary graft. (Brenizer).

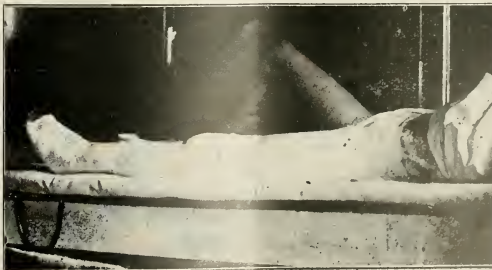


Fig. 38. Case XIV—Redressment with intra-medullary graft and plaster spica. (Brenizer).

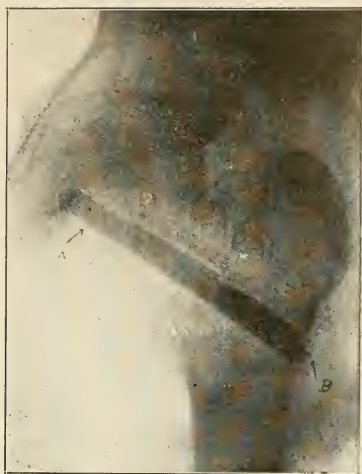


Fig. 40. Case XVI.—Bone peg from tibia driven below trochanter into neck and head of femur. (After Albee).

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Fig. 41. Case XVI—After pegging neck and head of femur, extension. (Brenizer).



Fig. 42. Case XVI.—After pegging neck and head of femur. Flexion. (Brenizer).

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Fig. 43. Diagram of Albee's operation for correction of congenital dislocation of hip. (After Albee).



Fig. 44. Case XVIII—Club feet. (Brenizer).



Fig. 47. Resection of upper end and articular surface of tibia. Pedicled fascial flaps prepared from capsule of knee joint. (After Murphy).



Fig. 45. Case XIX—Corrected right club foot. Brace for turning foot. (Brenizer).



Fig. 46. Diagram showing method of correcting club foot by graft used to spread scaphoid. Wedge removed for correction of flat foot. (Albee).



Fig. 48. Fascial flaps interposed over cut end of tibia between tibia and condyles of femur. (After Murphy).

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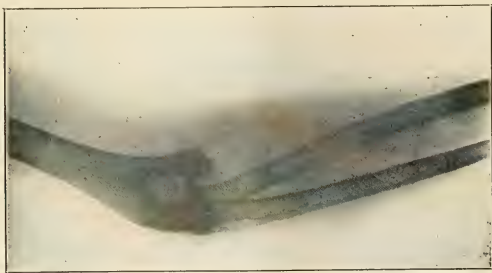


Fig. 49. Case XX—Elbow resected for tuberculous ankylosis, with fascia interposed. Elbow extended. (Brenizer).

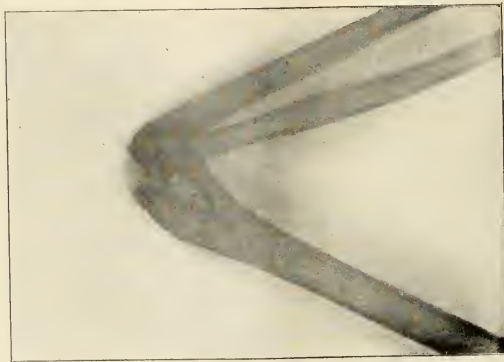


Fig. 50. Case XX—Same resected elbow in flexion. (Brenizer).



Fig. 51. Case XXI—Resected hip joint with interposition of facia. Leg extended. (Brenizer).



Fig. 53. Case XXII.—Resected hip joint. Leg in flexion. (Brenizer).



Fig. 52. Case XXI.—Same case as Fig. 51. Leg flexed. (Brenizer).



Fig. 54. Case XXIV.—Bunion hallux valgus before operation. (Brenizer).

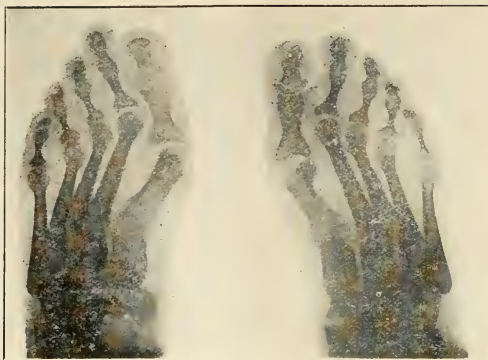


Fig. 55. Case XXIV.—Bunion-hallux valgus after resection of metatarso-phalangeal joint of great toe. (Brenizer).

SOME STUDIES ON THE THYROID GLAND.*

By E. H. Bowling, B. S., M. D., Durham, N. C.

When the thoughtful physician views the present wave of therapeutic nihilism that for the past several years has threatened to engulf the minds of the members of the Healing Art; one is forced to stop and take his bearings and to try to find whence we are drifting. It is an axiomatic fact that the world will not much longer be satisfied with the empiric methods that have prevailed in the past. The more intelligent of our patients will not be drugged with the nauseous concoctions that have afflicted our forefathers, unless we can have a definite result in view. It is probable that medicine can never be made an exact science, but we can at least make a more thorough study of mechanism of this wonderful body which can be truly said to be superlative craftsmanship of the handiwork of God.

It is probably natural for us to congratulate ourselves when we take an inventory of the vast amount of knowledge we possess, as compared with the salivation, purgation and venesection of the members of our guild, say one hundred years ago; but if we eliminate the modern serums and antitoxins the comparison in our favor is not so brilliant as one might desire. The future of medicine is along the lines of serums and antitoxins and the understanding how to stimulate or inhibit the

action of the ductless glands. The object of this paper is to stimulate study of the thyroid gland.

The thyroid gland is known to have a special influence on the nervous and muscular system, the skin and epithelial structures on the sexual function and on the osseous system, and as I believe on the gastric secretions and on the general metabolism. The effect of this gland on the mental well being of the patient is plainly evidenced in Cretinism and Myxedema.

It can safely be said that the thyroid is the most wonderful organ of the body. Through its internal secretions, it influences the growth of the body and the physis and mental activity of the adult; it regulates the growth of bone, the formation and distribution of adipose tissue, and the nutrition of skin, teeth and nails. It influences the rate of the heart beat and the peripheral circulation thus influencing more than any other agency the blood pressure; in conjunction with the pituitary the nitrogenous metabolism of the body and through its hormones very likely, indeed probably, controls assimilation, and the natural resistance to disease. The opsonic index can be measured by the action of this gland.

The thyroid is profoundly influenced by long standing toxins. There are natural waters especially springs in Switzerland and Wisconsin that whoever drinks of them whether man or beast has enlarged thyroid. These same waters when boiled are entirely innocuous showing plainly that there is some organism in these waters that irritate and enlarges the

*Read before the Sixth District Medical Society of North Carolina.

thyroid. Is it unreasonable to believe that the toxins of any chronic disease circulating in the blood would have the same deleterious effect upon this gland? Taking this view is it not easier for us to account for the manifold nervous symptoms that we find in these chronic diseases? Would this not account in a measure for the insanity of Pellagra?

I called attention several years ago to the fact that in all cases of advanced pellagra there was a total absence of Hydrochloric acid in the stomach, this was afterward proved true by the observations of Siler and Garrison. I have noted in almost numberless cases the acid laden breath of the parturient woman and who of us has not been importuned to relieve the hyperacidity of the pregnant woman. Now reasoning by analogy, it would appear that in the case of the pellagrin with his body saturated with the poisons of the disease and suffering with a hypothyroidism, we find no free hydrochloric acid with the pregnant woman in whose case we know there is a thyroid whipping up the body to its fullest activity we find a hyperacidity, it seems reasonable that the thyroid does influence if it is not the prime and sole cause of the secretion of hydrochloric acid in the stomach. Then if it is the cause of the secretion of hydrochloric acid why not of pepsin and the other digestive ferments. We know that the thyroid influences the formation and disposition of fats, how else could it do this without primarily influencing the digestion? The parathyroids influences the calcium metabolism of the body and as tuberculosis is primarily a lime starvation, I make bold to prophesy that future clinicians will cure tuberculosis by treating with methods now only suspected, this dreadful white plague. Cancer which to us is such an enigma will finally be conquered by understanding and scientifically treating morbid internal secretions.

All cases of exophthalmic goiter have diarrhoea from subacidity of the alimentary canal, which is only another evidence to prove that the thyroid does influence the formation of acid in the stomach.

It is not my purpose to go into any fine drawn theory, but as I am writing a practical paper for practical men, it is my purpose to call attention to some of the things that we overlook in our every day work, not because we do not know, but because we do not look and think.

How many of us have been consulted, especially by our female patients, for chloasmic pigmentation of the skin and

we have passed them on as Liver spots, possible given a dose of calomel and an inunction of ammoniated mercury and let go at that?

We do not stop to think that nearly all these pigmentations are traceable to a faulty action of the thyroid. I was recently consulted by a patient who for several years had suffered with periodic passive capillary congestion of the hands, and the man was unduly alarmed about pellagra. I tried various remedies without result and the more I failed the more alarmed he became about pellagra, until finally I thought of the thyroid as being the exciting cause and began treatment for that to the lasting benefit of the patient and very pronounced relief to myself.

Most of the cases of hysteria, in both male and female for I find that the male can and does have hysteria, not in the same form, but hysteria just the same, can in nearly all instances be traced to the thyroid, and with the proper treatment of the gland we will be surprised and gratified with the results obtained. What we term chronic malaria and pernicious anaemia would be much more amenable to treatment if we make a more thorough study of the action of the thyroid and direct our treatment more to the proper functioning of that gland.

As before stated in this paper it is my firm belief that our descendants will conquer tuberculosis and cancer by a more thorough understanding and a more comprehensive treatment of the thyroid and through this organ improve the digestion and assimilation functions and what are now such enigmas to us will be clear to them.

The future treatment of obesity and its antithesis excessive leanness will be directed solely to the proper functioning of the thyroid.

Time will not permit me to go into the inviting fields of the mental development of backward children, or the spurring on to feverish activity of the dull and sluggish adult, how it will be possible for the future physician to do vastly more than we can now accomplish in smoothing out the road of many cases of marital unhappiness by stimulating the thyroid of the cold and unresponsive partner and inhibiting the same gland in more amorous of the parties concerned.

With a subject so vast for beneficence and evil it vitally concerns us physicians to be alert and know how to meet a proposition of such pretean potentialities. How

shall we treat these cases when once have recognized the condition?

For goiter and hyperthyroidism we can lean with confidence on the surgeon, but these cases all come to the family physician first, and all these cases are not surgical when once they have been recognized. There is a vast field for the internist and we must be up and doing; we must not satisfy ourselves with the unction that there is not much known in therapeutics that will influence the action of the thyroid. It is true that our knowledge now is infantile, but there is Balm in Gilead; there are remedies for the pathological thyroid, the most widely used at present being iodine and its various salts, these with thyroid extract just about complete our armenarium as now constituted. As to the efficiency of these two drugs, there can be no question, but, if we depend upon these alone the record of our failures will be appalling. They have their place, especially is the thyroid extract beneficial in hypothyroidism, cretinism and myxedema but it is contradicted in hyperthyroidism, hysteria and nervous conditions.

My experience has led me to believe that in the chloride group we have much more potent remedies than in the iodide group. Sodium chloride is no doubt nature's first and the greatest thyroid stimulant. Ammonium chloride given in long continued treatment is the only remedy that I have ever found that would cure goiter. If the treatment was instituted before the formation of pus or there was too great hypoplastic changes in the gland, chlorate of potash given in two to five grain doses either alone or in combination with Lithia and some digestant has done more in my hands to relieve the enlarged thyroid of long standing infectious—notably pellagra than any remedy I have ever used. Chlorine water given in teaspoonful doses every two to four hours will have a most salutary effect upon a diseased thyroid. I have seen this remedy unaided and alone cure case after case of pellagra, and I am not certain even now, if it is not the best single remedy we have for that complaint. I have seen the same remedy a most beneficent effect on pulmonary tuberculosis, and I believe I have seen it cure tuberculosis in the incipient stage, but recognizing my very circumscribed ability in diagnosing tuberculosis in its early stages, I have often marked up to mistaken diagnosis these cases that I suspicioned with tuberculosis and make such untoward recoveries.

Tobacco with the vast catalogue of sins marked up against it is evidently a thyroid stimulant when used in moderation. *Phytolacca decandra* or ordinary poke root is one of the best vegetable remedies that we have for the diseased thyroid. *Echinacea* is another remedy that should not be overlooked and I believe that the future internist will be much more liberal in his use of this drug than we of the present.

The use of hydrochloric acid and nitrohydrochloric acid in these conditions of the ill functioning thyroid has been sadly overlooked by us. These acids, especially where there is a hyperacidity will give us wonderful results. The tincture of the chloride of iron, in my opinion does its best work as a heamatinic on account of the fact that it contains an excess of hydrochloric acid.

SUMMARY OF REPORT OF LIEUT.-COMMANDER WILLIAM SEAMAN BAINBRIDGE.

By Eliza M. Mosher, M. D., Brooklyn, N. Y.

A special number of the U. S. Naval Bulletin was issued early in 1919, consisting of a report on "Medical and Surgical Developments of the War," by Commander William Seaman Bainbridge of New York City.

Dr. Bainbridge, who has served in the Navy Reserve as Lieut.-Commander since the United States entered the war, was commissioned in December, 1917, by the Surgeon General of the United States Navy to survey the warring countries, in order:

1. To record the surgical lessons of the present war based on the experiences of our Allies.

2. To secure anything likely to be of value to the United States Naval Medical School, Washington, D. C., or helpful in the preparation of medical men and hospital corps men for active service.

To accomplish this, Dr. Bainbridge not only observed but surgeons worked with the surgeons in the field, and then with this first hand experience weighed results and methods, so as to record and report them. Thus his report is of such value that it should be read by every physician and surgeon in America. It contains a concise and condensed medical and surgical epitome of the wonderful work done from the battle line all the way back to the base hospitals.

The printed report is illustrated by more than 200 photographs and drawings

showing hospital ships and railway trains, surgical dressings and appliances, wounded men before and after operations, etc. Methods of treatment, both medical and surgical, are outlined in chronological order showing the great advances made between the early days of the war and its close.

Although this war has been a dreadful school in which to learn, this survey demonstrates the fact that the lessons taught have not been lost. The world will be infinitely better cared for medically and surgically hereafter because of the intensive study carried on during the four years of tragic training.

The Treatment of War Wounds.

Dr. Bainbridge's chronological table of the treatment of war wounds is both interesting and instructive:

1. The period of ordinary antiseptic agents; second half of 1914 and first half of 1915.
2. The period of wound drainage combined with antiseptics, 1915.
3. Introduction of hypochlorites, later in 1915.
4. Evolution of the Carrel technique of intermittent wound instillation, early in 1916.
5. Ascendency of Bipp method, 1916.
6. Period of approximately equal use of Morison and Carrel methods, 1916-19917.
7. Prominence of flavine and colored wound paste, such as brilliant green, 1917.
8. Progressive general adoption of wound excision method (which had its beginning early in 1916), late in 1917.
9. Period of primary wound suture, immediate or delayed, 1917-1918.
10. Period of attempted selection, adaptation and standardization, late in 1918.

Before devoting twenty-five pages to a description of the Carrel treatment of wounds with minute and explicit directions regarding the method, and sixteen pages to other methods the results of which are worthy of record, Dr. Bainbridge gives the following summary as the last word in the surgery of wounds:

"Under favorable conditions primary union by immediate or delayed suture of war wounds which have been operated upon and properly purified is now the last word in this branch of surgery. Experience in the world war has taught entirely new lessons to the surgeons who found themselves confronted with unprecedented conditions—both in regard to the masses and classes of war wounds they

were expected to handle. Perhaps the most important lesson of all with the closest bearing on wound treatment in general, consists in the recognition of the fact that antiseptics are inefficient without the most careful and thorough mechanical purification of the wound including the complete removal of all dead or nonviable tissue.

"Strong antiseptics, such as were used early in the war in the expectation of arresting sepsis, were fore-doomed to failure, as a result of the unprecedented bacterial contamination of war wounds sustained in the germ-laden battle fields of Flanders."

According to Sir Anthony Bowlby, "No definite rule can be laid down as to the lapse of time after which suture should not be done, but the sooner a wound can be operated upon, the greater is the probability of success. As a matter of fact it is not advisable to close war wounds involving extensive lacerations or complicated fracture cases, for all oozing from the wound must have ceased before a successful suture can be applied. "Circumstances alter cases" and the best treatment for a given wound rests with the surgeon in charge."

"It goes without saying that the ever present contingencies of infection and supuration are materially lessened by the early performance of complete wound closure."

"Scrupulous asepsis is the imperative condition of primary wound suture, immediate or delayed. While thorough in the removal of all hopelessly damaged tissue, the excision should be as conservative and restricted as possible."

"Secondary wound suture is recommended at the earliest possible date, where primary suture could not be applied. Only those war wounds are now left open in which there is an association of anaerobic and streptococcal infection."

"In justice to the method of primary suture, it should not be attempted in very large wounds with irregular tracks, where there is extensive shattering of bone. In fracture cases the importance of complete fixation and immobilization from the earliest possible moment cannot be overestimated."

In conclusion it may be said that this procedure has come to stay, and that with the reservation of its three requirements, viz., an experienced operator, a convenient locality, and sufficient time—the adoption of primary wound suture will steadily extend. It is imperative that the

operator be one who knows how much tissue to remove. If too little be removed death may result; if too much, a mutilation which is sometimes worse than death.

Anaesthesia.

"War surgery is demonstrating more clearly than has ever been appreciated in the past, the close relation between anaesthesia and the extent of mortality and morbidity, Major Marshall, who spent more than three years in an active part of the forward area, stated it as his conviction, that the bulk of preventable deaths at a casualty clearing station was due to giving the wrong anaesthetic, or to giving the right anaesthetic wrongly.

The various types of anaesthetics used were:

1. Local and regional.
2. Gas and Oxygen (with or without ether.)
3. Oral.
4. Spinal.
5. Rectal.

"Local Anaesthesia," was used in many centers successfully even for major operations.

"Gas and Oxygen," was the method preferred when local anaesthesia could not be used, and it is believed by those who had to do with large numbers of desperate cases that, as compared with other anaesthesia, it lessened mortality and reduced morbidity. It was proved to be of special value in chest and abdominal surgery.

"Oral Anaesthesia," was introduced by Captain James Gwathmey and Captain T. Kassner—both of the medical corps of the United States army. It was found entirely safe and was not followed by nausea or vomiting. Its effect lasted but a short time, which rendered it especially valuable for short operations and painful dressings. Supplemented by a hypodermic of morphine, or a little ether inhalation, it proved of great value when the movement of patients with fractures was undesirable and it economized the time of surgeons materially. The formula used was as follows:

Peppermint water, 5 minims.

Ether, 4 fluid drachms.

Liq. Paraffin in 4 fluid drachms.

"Spinal Anaesthesia," with a 4 per cent novocain sol. was much used for wounds of the lower extremities and for painful dressings below the waist-line. A preliminary dose of morphine was found valuable for its psychic effect.

"Rectal Anaesthesia," was employed

where long operations with plastic work on the head and face were necessary. In such cases it was found of special value, but it was not advisable to use it when there was difficulty of respiration.

Joint Lesions.

Dr. C. Willems, in a report of the work done by the Belgian Military Hospital at Hoogstade, claimed such remarkable results in joint lesions that, although skeptical, Dr. Bainbridge made the journey to Hoogstade to see the cases reported.

Dr. Willems has given up the immobilization of joints after injury; on the contrary he begins active movement of the joint at once.

"The motions must be carried out by the patient himself; they must involve those muscles ordinarily used in moving the joint; they must be begun the moment that the patient comes out of the anaesthetic; they must be carried out to the point of their maximum excursions, and they must be as nearly as possible continuous; they should not be supplanted by, nor combined with passive motions."

"These movements cause practically no pain unless they produce displacement of a large fragment of bone, in which case such movements are contraindicated."

"This method calls for the constant supervision of a trained attendant, and its success depends to a large extent on the courage and co-operation of the patient as well as on his power of co-ordination."

"The details of the treatment vary considerably according to the nature, extent, and location of the injury."

We shall look forward with interest to the appearance of Dr. Willems' book on the subject, which he promised to publish after the war.

Fractures.

Early in 1915 the death rate in some classes of compound fractures was appalling, but owing to improved methods this has been greatly reduced and a contrast between the mortality and morbidity then and now is most gratifying.

"Immediate immobilization, the use of a Thomas splint or some modification of it, careful splinting so as to allow of no grating of bone ends, the removal of foreign bodies introduced with the projectile, and the importance of not disturbing the injured parts are urged. The extent and character of operative interference; whether antiseptics should be used at all, and, if employed, which is the best, and the kind of splint which should be used after the case leaves the casualty clearing

station are as yet matters of varying opinions."

Trephined Cases.

These unfortunates have been found a difficult lot to deal with. "At schools and farms for re-educating the mutilated," and elsewhere "it seemed useless to try to help these men. Some get a little better after a while if left alone," according to Prof. Babinski, one of the greatest neurologists in the world. He advised operating, however, in all cases where symptoms of brain pressure persist."

Amputations.

The following is the consensus of opinion among surgeons, as far as Dr. Bainbridge was able to judge:

1. No amputation should be sutured primarily. When a man is seen with a good stump and there has been a primary suture, there has no doubt been needless removal of part of the limb. Always conserve length of the lever. Primary suture does not do this.

2. Early secondary suture; after smears show less than one per field of bacteria, then suture. Never suture, however, when there are streptococci, no matter how few.

3. Never do a Chopart's amputation. You can never get a good apparatus to fit it. There is always a shortening of the tendo-Achillis. If the tendo-Achillis be cut, the part is much weakened, so never employ this operation.

4. A Pirogoff amputation is not good. Syme's is best.

Most important directions for making specific amputations are given in the light of results of war work, and various appliances are described.

The Red Cross has done a highly valuable work in providing artificial limbs for soldiers and stands ready today to furnish limbs or give any aid needed in these cases.

Plastic Surgery.

The subject of plastic surgery has long been one of great interest to Dr. Bainbridge, and probably no surgeon in America has done more successful work in this line than he. The twenty-seven pages he has given to this subject with the illustrative plates make this report one of great historic and practical importance.

"Restorative surgery today in the broad sense of the term includes plastic work in many lines, such as bone grafting, the restoring of nerve continuity, tendon transplanting, and implanting of adipose tissue to fill bone or lung cavities; but perhaps the most gratifying results have been ob-

tained in cases involving the restoring of the jaw and the remedying of gross defects of face and mouth."

The large number of post war facial deformities to be operated upon has made necessary, as Dr. Bainbridge foresaw in 1916, open wards and special hospitals for these patients in all the allied countries where the best plastic and dental work possible can be done. "In some cases," Dr. Bainbridge says, "the treatment will require years to complete."

Trench Fever.

"A vital medical problem for a long time confronting those responsible for the health of the armies abroad has been what the British have termed "P. U. O." (pyrexia of unknown origin). Comparatively recently the louse has been definitely incriminated as the carrier of the disease, and through this discovery a long step forward has been taken toward the elimination of much serious illness and disability resulting from this cause."

Probably at no time since the dawn of medical science have medical men with as many honorary letters after their names as Colonel G. A. Moore, C. M. G., D. S. O., D. D. M. S., and Major Sir David Bruce, K. C. B., M. D., L. R. S. A. M. S. given intensive study to so small and disgusting an insect as a louse. The task of eradicating the army of lice invaders was almost as gigantic as that of defeating the Germans, and yet as the carriers of trench fever, typhus, and relapsing fever of which over 25,000 cases occurred in one British army corps alone in the twelve months ending April 6th, 1918, they proved a formidable source of numerical loss of the man power of the army.

"When the problem of louse eradication is considered, it is to be remembered that the soldier himself is the chief source of infection. As Dr. Peacock says: "The louse is a parasite which is dependent utterly upon man's blood for sustenance and man's body and clothing for prolonged, prosperous longevity and reproduction." They are spread chiefly by contact, crawling from soldier to soldier, and leave the human body only when the surroundings are warm and moist, as in bed. The louse can live ten days at longest when unfed, and according to Warburton, the nits can remain dormant when away from the body for not more than forty days. The nits may survive freezing, but when they are kept dry and away from the body they usually begin to shrivel up in a few days. The eggs are laid chiefly in the seams of the clothing, being found in greatest num-

bers in the underclothing and in the fork of the trousers. They are laid also on the body hairs, and the infested parts or even the whole body may have to be shaved in order to prevent a rapid reinfestation."

The multitude of remedies suggested for the eradication of lice proves that no adequate insecticide has been found. Many of these mitigate the evil, but are impotent to remove it.

"When a complete disinfestation plant can be established, with baths and laundry facilities, freeing men from vermin is comparatively simple. They are usually treated in groups of 20 to 100. The station is divided into two sides, clean and unclean, these two sides being separated on the outside also by a high wall. The men strip when they come in and hand all their belongings to an attendant, to be taken to a disinfestor. The men then bathe, are shaved or receive a hair cut, when necessary, and after due precautions are transferred to the clean side where they receive their disinfested garments. As far as possible, care should be taken to keep the clean men from mixing with the unclean, and new men coming into a unit should be inspected before being allowed to come into contact with the other men."

The discovery of lice as carriers of typhus and relapsing fevers is only second in importance to that of the mosquito in the causation of malaria and yellow fever.

Care of the Wounded From Firing Line to Convalescent Camp.

Through the courtesy of Director General Godwin and his aides, Lieutenant Commander Bainbridge was able to observe every step in the history of the wounded man from the moment of receiving first aid until he was either restored to military duty or discharged as unfit for further service. He followed the stretcher from the battle field through regimental aid post, advanced dressing station to ambulance, by field ambulance to main dressing station, through casualty clearing station ambulance train, through stationary hospitals, by ambulance transport to England, and by ambulance train to the base or special hospital, and finally to the convalescent camp. One of the most frightful happenings was the bombing of hospitals in which both officers and men lay in fracture apparatus. Wounded officers, who could stand shelling in the trenches and never feared going "over the top" became very panicky under hospital shell fire. The rule was to put cotton in

the ears of all patients on arriving to save them anxiety.

Major Lockwood's advice in regard to shock was, "Control hemorrhage and do necessary splinting early. Never use stimulants. Quiet and external heat are the best restoratives. At times salines under the skin may be useful, but these must be given carefully. There have been cases, he told Commander Bainbridge, in which sloughing of the breasts occurred due to hypodermoclysis. Bicarbonate of Soda and Glucose by rectum proved an excellent support to the patient's vitality."

Dr. Bainbridge's description of English and American ambulance trains is very interesting. Each train had 16 cars, 10 of which were ward coaches. The normal load of patients in such a train was 118 lying and 462 sitting cases. Usually a Captain or Major was in command with a Lieutenant as assistant, and there were two medical officers, two trained nurses, four orderlies, one quarter-master, two sergeants and three corporals. It was found that operating rooms were not needed on these trains.

The transfer of patients to the boat at Dover and later from boat to train was accomplished with system and despatch, and the men were carefully moved and most kindly treated; every effort was made to keep up their spirits; a victrola entertained them and some played games. They were not allowed to smoke, because each man wore a life belt which was very inflammable. A small stretcher cart was used for the transfer to trains. This not only added to the comfort of the patient but also relieved the stretcher bearers. Bearers should not keep step, it was found, as it shakes a patient too much.

At all the stopping places by the way women of refinement—volunteer workers—were in waiting with a dainty tray for each wounded soldier. On each tray were sandwiches, coffee, strawberries or other fruit, a lump of sugar and cigarettes—even a handkerchief and a few flowers were often added. Every man walking or on a stretcher received a cheering word of welcome.

At Dover the patients were classified and distributed to the hospitals best suited to their special needs. On arrival a post card was given to each to be sent to his next of kin announcing his arrival and telling how relatives might obtain half rate railway tickets to visit him, if unable to pay the full fare.

Dr. Bainbridge made a careful study of

the work done in all the great hospitals in England, France and Belgium, and reported the special features which characterized each. He gave a very interesting and instructive account of the splendid work of our own distinguished American surgeon, Lieut. Col. Geo. Crile of Cleveland, Ohio. A year before America entered the war Dr. Crile went over to co-operate with British surgeons, taking with him a hospital unit. He gave to Dr. Bainbridge an extremely valuable summary of the lessons learned from the war which the latter embodied in his report.

Convalescent Hospitals and Camps.

In order to relieve the general hospitals, and to hasten the return of men to the battle front, four large convalescent hospitals and camps were established early in the war. Men able to be up and about were sent to these where they were given remedial exercises, apparatus work, massage, etc., to fit them for the hardships of army life. At the King's Lancashire Military Convalescent Hospital, Blackpool, Col. Barron, a London physician, introduced an apparatus for the treatment of flat foot, which Dr. Bainbridge says should be placed in every hospital and gymnasium in civil as well as in military centers. It consists of a ladder like appliance placed horizontally upon the floor or ground with rungs especially adapted to the exercise of the plantar and ankle muscles, 20 to 30 minutes exercise upon this ladder once or twice daily for three weeks practically cured every case of flat foot.

Military Orthopaedic Hospitals.

"It is to the conservative trend of modern surgery that the extension and development of the field of orthopaedic surgery is to be attributed. Not only are amputations and mutilations of many kinds avoided through a timely recourse to orthopaedic methods of treatment, but permanent bodily deformities and functional disablements are prevented."

"It is a significant fact that on January 1st, 1918, there were in the 16 orthopaedic hospitals in Great Britain and Ireland upwards of 15,000 wounded men and of these 75 per cent eventually returned to the army."

The Re-Education of the Disabled.

"In former times men who had lost limbs in the service of their country were given such surgical treatment and meager equipment as the times afforded. After

this they were turned upon the community with a pension in a soldiers' or sailors' home."

"In this day no enlightened nation would be satisfied with so limited a course. Economically such waste of man power would be unthinkable; ethically the failure to recognize a wider responsibility would be inexcusable. In addition to surgical care and the best possible artificial limbs, the disabled man must be given—first, functional re-education in order that he may make the best possible use of the unharmed muscles and of the new apparatus; second, vocational re-education that he may become economically independent in case he cannot return to his former occupation.

Experience in England and elsewhere has shown that it is unwise to leave functional re-education to the time after the wounds have entirely healed. Habits conducive to helplessness and reliance on others have been formed, and the self assertion and energy necessary to the overcoming of his difficulties are hard to arouse in a seriously maimed man."

"The method of immediate mobilization finds a promising field in the majority of the ordinary wounds of war. A very responsible part of the treatment devolves upon the physician in charge at the outset. The patient must be taught the performance of the active movements needed to maintain the teamwork of the muscles.

Dr. Bainbridge had a large number of photographs taken of the re-education work rooms in schools and elsewhere in the Allied countries. The 35 of these given in his report should be of immense interest and value to those who are conducting re-education work for our crippled soldiers in the United States. The earnest eagerness in the faces of these men at work learning new ways of making themselves useful is truly remarkable, when one remembers that they must go through life shockingly handicapped.

The Surgeon General of the Navy asked Lieutenant Commander Bainbridge to make suggestions and recommendations, based upon his first hand information of conditions, to aid in the future development of the medical and surgical care of the American army in the field. These were given in a confidential report which accompanied the one here reviewed. That Dr. Bainbridge's service to the government during the war has been of value is demonstrated by the fact that he has lately had conferred upon him the rank of Commander.

VITAL STATISTICS OF THE ORGANISM.

By G. N. Murphy, Paducah, Ky.

Much has been written on this subject and much more I suppose could be written on it without exhausting the theme.

What I shall offer in this paper is only my personal opinion and is given for what it is worth as I am not able to prove my contention. I believe that God the Creator of all things in Heaven and earth has placed in every organic body both vegetable and animal, vital forces that are capable, under normal conditions, to preserve such organisms in a state of health during their allotted lease of life on earth. What these vital forces are, where they reside and their manner of functioning I am not able to state. These natural defenses of the organism I believe are multitudinous and vary as much in kind and function as different diseases do. I believe that each vital force is a separate and distinct entity and protects the organism against one disease only. For instance the vital force that protects against smallpox would not protect against measles or any other disease. In other words each separate disease meets in the organism its own special resistance. And just so long as the vital forces remain in a normal condition the organism is immune from disease. I believe that these vital forces are crippled or even destroyed in many different ways as bad hygienic environments, excesses or deprivation of nutrition, mental depression and abnormal conditions in general. When these abnormalities occur and are not corrected they become stabilized and are perpetuated by inheritance to future generations they are then termed constitutional or inherited predisposing causes to certain disease according to circumstances, as tuberculosis, cancer, epilepsy, etc. When these diseases obtain independent of heredity they are said to be acquired causes. So all diseases are either acquired by some cause, abnormal or the predisposing cause is inherited. If a perfect equilibrium of the vital forces could be maintained through life disease would be unknown.

Dalton, the physiologist, gives a suggestive hint along this line when he said: The seed germinates, grows, blossoms, bears fruit, wither and decays, the animal is born, nourished brought to maturity after which it retrogrades and dies.

I once knew a man who was 99 years old who said to the writer that he had

never been sick a day in his life and had never taken a dose of medicine. He was both physically and mentally well preserved. I take it that all his vital forces had held in tact from his birth until the time that I knew him in his 99th year of life.

"OUT OF THE ORDINARY CASES."

By A. E. Mowry, M. D., and M. S. Oliver, M. D.,
Professor and Associate Professor Genito-Urinary and Venereal Diseases Chicago
Hospital College of Medicine; Attending Genito-Urinary Surgeons to Provident and Ft. Deaborn Hospitals,
Chicago, Ills.

CASE 1.—Patient Mrs. C. informed us that she had been given ether at the time of several previous operations but the surgeons were unable to keep her anesthetized and she had become conscious during these operations much to her mental discomfort and anguish and also to the embarrassment and chagrin of the operating surgeons. She demanded that we stick absolutely to chloroform so that she might not wake up and observe the technique of a laparotomy on her own person but as the operation was of such a nature that it might consume more time than is ordinarily consistent in the use of chloroform alone we finally persuaded her to allow us to administer ether during the operation after we had first secured a complete anesthesia under the chloroform. The initial administration of chloroform was without any untoward symptoms and when the patient was well under its influence we cautiously changed to the open drop ether administration but the patient almost at once manifested alarming symptoms such as syncope, marked bradycardia, and sudden dilation of the pupils. In fact it seemed that sudden death might ensue and as soon as respiration and heart action had been restored chloroform was again administered for the period of the operation without any further anxiety or trouble. This case clearly shows a marked idiosyncrasy towards ether and in this particular case of its strict contraindication. We could see why the previous operating surgeons had allowed the patient to wake up during the operations for judging from our own observations in the case they might have been only too glad to see the "Wake up."

CASE 2.—Mrs. F. who had been operated on at the Post Graduate Hospital some time previous and had had both fallopian tubes, one entire ovary and the ma-

por portion of the other ovary removed came to us complaining of frequent urination. On examination the offending cause seemed to be an enlarged and probably pregnant uterus pressing on the urinary bladder. We so informed her but she told us that such a condition was highly improbable as the surgeons had told her shortly after her operation that the nature of the operation would preclude a pregnancy. However, the birth of a healthy baby boy amazed the family and the operating surgeons and we all had a new guess coming as to how the pregnancy might have occurred.

CASE 3.—Miss S., 24 years of age, fairly good health. Mother insisted that her menstrual flow came from the urinary bladder instead of the uterus, i. e., a vicarious menstruation. At first we informed the mother that she was probably mistaken but as she insisted that she was right the patient was put in a hospital for observation at expected time of menstruation. No menstrual discharge came from the uterus but there was a copious flow of blood from both kidneys that was easily demonstrable by use of the cystoscope and urethral catheterization.

Many things that patients tell us sound absurd but there is always that remote possibility that they might be right in their assertions at times, even though they seem highly improbable. The unexpected and unlooked for will happen in the practice of medicine and surgery as well as in other avenues of life.

After the Long School Year

the tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic. With the coming of warmer weather, this depreciated condition becomes accentuated and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells, and hemoglobin, and employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and assimilable organic combination of iron and manganese, the agents most needed for blood repair, and general reconstruction. It is pleasant to take, and does not irritate the digestive organs nor cause constipation.

THE DOCTOR AND THE PUBLIC HEALTH.*

By C. St. Clair Drake, M. D., Director of the Illinois State Department of Public Health, Springfield, Illinois.

Public health as a distinct part of governmental activity and as a special scientific vocation is of relatively recent development. At the time of the creation of the Illinois State Board of Health in 1879—a matter of forty years ago—Dr. John H. Rauch, the Secretary of the first Board of Health, was regarded as a pioneer in public health activity and Illinois claimed the credit of being one of the earliest states in the Union to devote attention to the protection of the lives and health of her people. But at that recent date, public health had only a remote resemblance to the preventive medicine of the present day. The State Department of Public Health of forty years ago, of thirty years ago, or of twenty years ago, devoted itself almost entirely to the suppression of communicable diseases after an epidemic had occurred or to the suppression of nuisances which made themselves known by noisome odors or offensive appearance and which may or may not have had anything to do with human illness.

In fact, these old time organizations were designed and maintained chiefly to meet emergencies and were relatively dormant and inactive between periods of public catastrophe. It must be borne in mind that the time of the establishment of the Illinois Department of Health, the causes and means of prevention of most of the communicable diseases were wholly unknown. There were few local health departments and those that existed were usually headed by laymen who served more in the capacity of policemen than as sanitarians or health officials. For the most part, the health adviser of even the towns of considerable size was the family physician who added this duty to his manifold functions as physician, surgeon, obstetrician, dentist and not infrequently, other activities, having little or nothing to do with his professional life. Even a brief review of the public health development of the nation would be inadequate and incomplete without a tribute to the medical profession which has given us our scientific basis for modern public health and to the hardy pioneers who served without

*Read before the Tri-State District Medical Association of Illinois, Iowa and Wisconsin, Rockford, Illinois, September 1-4, 1919.

remuneration and without reward as the health counsellors of their communities.

The public health official of the present time speaks an entirely different language from that employed by his predecessor of forty years ago and practices an art which was entirely unknown in a previous generation. The modern health officer follows a distinct specialty which, in its important medical phases, differs more from the general pursuit of medical practice than dermatology does from abdominal surgery. In addition to these medical phases of public health, however, there are numerous other elements essential to the development of public health work which have little to do with the practice of medicine in any way. The modern health officer must be conversant with a large part of medical knowledge, it is true, but this knowledge must be supplemented by a knowledge of government, of law, of administration and of executive control which have little to do with the treatment of the sick. As a matter of fact, the public health of the present day, while closely associated with general medicine, is so distinct a specialty that several of the larger universities, giving courses for health officers, do not require a medical degree as a pre-requisite.

It is my personal impression that a broad general knowledge of medicine and of medical practice is of distinct value to the public health officer, not that the complete course in medicine is essential to him in the pursuit of his calling but chiefly because his medical experience affords him a greater knowledge of the problems that confront the physician and acquaints him with the point of view of the medical profession, for however widely preventive medicine may depart from medical practice, there will, of course, always be a close and important inter-dependence between the public health official and the medical profession.

Yet it seems to me quite necessary that the physicians of the nation, engrossed though they may be in their arduous duties, shall observe the rapid strides with which preventive medicine is becoming a distinct specialty and that these physicians shall endeavor to understand more clearly the viewpoint which the public health official must assume if he is to conscientiously, scientifically, intelligently and effectively carry out his duties of health conservation along modern lines. They should come to recognize that the old order of things has changed and that the modern health officer cannot be meas-

ured by the standards of years gone by.

There still prevails the idea that the physician is qualified to serve as health officer merely in virtue of his professional education and experience; there are still occasional unfortunate instances of the use of the health officership as a haven for the aged or needy doctor; but the ranks of qualified specialists in the distinct art of preventive medicine are gaining so rapidly that there is no longer any way the man who has failed in the general practice of medicine. The man who becomes a health official because he is old, because he is decrepit, because he is financially crippled or because he has failed to make good in other lines of work, will almost invariably fail to measure up to the modern standards of public service, while the attempt, once very common, to combine private practice with public health service, as illustrated in the part-time health officer, is rapidly being abandoned as impractical and inefficient.

It is exceedingly difficult and embarrassing for the health officer to carry out the duties imposed upon him fearlessly and effectively when he is himself engaged in practice in competition with other physicians and such a health officer is likely to fail in his public obligations because the demands of his private practice may be greatest at just the time when he should devote his undivided attention to the public welfare. In fact the tragic general breaking down of local health departments during the "Flu" epidemic of the past fall and winter was largely due to part-time health officer service and the desertion of public obligation in the interest of greatly increased private practice.

In the past, it has been difficult to attract competent and qualified health officers on account of the niggardly compensation accorded them; but the awakening influence of the war and the increasing popular interest in matters of health are gradually loosening community purse strings.

During the past decade, a number of radical changes have been introduced in the practice of preventive medicine and the wisdom of these innovations has been amply proven by our experiences within the past two years when the highest degree of efficiency in health promotion and disease prevention seemed essential to our successful promotion of the war. Without understanding clearly the changing attitude of governmental agencies and the conditions which have presented them-

selves to health officials, it is but natural that the general practitioner should have looked upon these innovations with question if not with open suspicion and yet it is interesting to note that, whenever the practicing physician has taken the time and trouble to study modern public health problems, he has almost invariably concurred in the policies which are being employed and has commended the newer developments as indicative of more efficient and more intelligent means of health control.

Prior to the war, health authorities were confronted by three great problems in disease prevention and health promotion and I regret to say that, in the majority of instances, these health officials did not rise to their opportunities until compelled to do so by war-time emergency and by over-whelming popular demand.

During the war, however, it became tragically obvious that the cost of this neglect on the part of the health officials was more than the public was willing to bear. Exemption boards and military examiners brought to light a prevalence of tuberculosis and of venereal infection that came as a serious jolt to our national pride and shocked health officials into a belated activity. On the other hand, the great prevalence of general physical debility found by exemption boards indicated the urgent need for more intelligent preventive measures in dealing with children, while the problem of repopulation of the war-stricken European nations gave to child life and child welfare a new and convincing importance.

It consequently became necessary to develop with all possible speed, the machinery essential to meeting these problems and now, that the armistice is signed and the war is over, no conscientious official can step backward. He must go forward trusting in the sympathetic co-operation of an enlightened and public spirited medical profession; but at any rate he must go forward.

In meeting the problem of venereal disease, of tuberculosis and of child welfare, and to a certain extent in dealing with poliomyelitis, extensive clinical work has been imperative and this essential phase of modern preventive medicine, in certain rare instances, has been looked upon with suspicion by the medical profession.

There is no question but that public dispensaries have at times been abused; but it is none the less true that wherever public clinics have been operated and associated with broad educational campaigns,

enormous public good has been done and the members of the medical profession have directly profited. Wherever there is a good tuberculosis dispensary, private physicians find more requests for physical examination; wherever infant welfare stations are operated, doctors are in more demand for the care of the children of the well-to-do; wherever there is a good venereal disease clinic, patent medicines, quackery and counter-prescribing are discouraged and intelligent treatment is more generally sought from the medical profession. Opposition to such public health clinics almost invariably disappears when the clinics are once fairly established.

It is fortunate that these health activities are of direct benefit to the medical profession because they are absolutely essential to successful attack on the most vital of health problems; but if they were not profitable they would still have to go on and they would be supported by the higher class of the medical profession. A more enlightened public appreciates the need for them and insistently demands them and we are now coming more and more to realize that general public welfare must be promoted regardless of individual interest.

In this connection, however, I want to be distinctly understood as being opposed to the abuse of public dispensaries and of being convinced that medical service for clinics and dispensaries should not be gratuitously rendered. With the increasing cost of living, practically every thing has advanced except professional compensation and there is no more reason why the public should expect free service from medical men than it should expect uncompensated service of nurses, free rent or free commodities from the merchant.

But the awakening to the fact that the interest of the public is paramount to the interest of the individual patient has come. Public sentiment condemns the physician who endangers the lives of the community in failing to report communicable disease as a means of currying favor with his individual patrons. The intelligent public regards the reporting of contagious disease as it does the reporting of a fire—as the means of preventing general conflagration—and the public believe that, in accepting the special privilege of medical licensure, the doctor obligates himself to aid in conserving human life.

Regardless of our own feeling about it, the public is coming to believe that the doctor does not completely earn his ob-

stetrical fee until he has taken precautions to prevent ophthalmia neonatorum and has reported the birth to the proper public official.

The greatest strides in public health have come through the broader education of the people as a whole and I foresee, in the not very distant future, a public sentiment so established that the physician who ignores health laws and public obligations will lose caste and patronage thereby and that greater and more material recognition will be accorded the doctor who does his full duty to the public. In that day, I foresee better provision for the medical profession—good laboratory facilities maintained at public expense in every community; general suppression of quacks and charlatans; the discouragement of counter-prescribing and the payment of fees and emoluments commensurate with the actual value of health and life so far as these can be measured in dollars and cents.

The awakening of that public sentiment and the appreciation of the importance of public health was observed in the far-seeing vision of Governor Frank O. Lowden, of Illinois, when he drafted the now famous Civil Administrative Code of the State. Under the provisions of that epoch-making instrument, several hundred state boards, commissions and bureaus were combined into nine departments and one of these nine major divisions was devoted solely to the promotion of health and prevention of disease. The department was relieved of such functions as examination and licensure of physicians and was created a simon-pure health department. I regret to see that Idaho, the first of several states which will eventually adopt Governor Lowden's plan of state government, did not accord to health the place to which Governor Lowden felt it is entitled. However, with the present trend of public sentiment, all states will give more and more attention to the health of their people and the health officers will become more and more essential to the successful conduct of the community.

As I see it, this progress will now be rapid. There have come back from the war hundreds of physicians who have had rigid schooling in health conservation, many of whom will prefer continued public service to the resumption of private practice and there have come back to all parts of the country, hundreds of thousands of young men—the men of affairs of the present and the coming generation—who have acquired a new idea of the im-

portance of health and who have been schooled in cheerful and ready acquiescence in health regulation. The new specialty of preventive medicine is coming into its own under remarkable conditions and under most auspicious circumstances.

SUMMER TEMPERATURES AND BATHS.

By F. E. Aspinwall, M. D., LaGrange, Ky.

135 deg. H.* (122 deg. F.) This is the halfway point between freezing and boiling, the two fixed points of all thermometer scales. It is said that sun heat often reaches this point in parts of the torrid zone. It is the upper limit of temperature for hot drinks, being almost scalding. As a bath temperature it would be intolerable.

130 deg. H. (118.6 deg. F.). This is extremely high summer heat and the upper limit for a full bath, in fact much too high for general use.

120 deg. H. (112 deg. F.). This is very high summer heat for temperate regions. Water at this temperature furnishes a very hot bath which in a few minutes usually causes free perspiration.

110 deg. H. (105.3 deg. F.). The best temperature for a hot bath, generally producing free perspiration in a moderate time.

100 deg. H. (98.6 deg. F.). "Blood heat." The full human normal within the radius of common sensation. The upper limit of normal summer heat. Water at this temperature furnishes a very warm or normal bath. It is useful for raising the body temperature to the full normal.

90 deg. H. (92 deg. F.). Water at this temperature furnishes a warm bath. Very useful for delicate constitutions when it is desired to cool the surface slightly.

80 deg. H. (85.3 deg. F.). This temperature in water furnishes a tepid bath which is very generally useful, being comfortable and refreshing.

70 deg. H. (78.6 deg. F.). A cool bath. Refreshing to people of vigorous health and is useful for quickly reducing a too high body temperature.

60 deg. H. (72 deg. F.). A very cool bath, suitable only for people of robust constitutions.

50 deg. H. (65.3 deg. F.). This is the half-way point between the vital heat zero (freezing) and the human normal. It is also the lower margin of summer heat. It is a most ideal temperature for outdoor work or play in moderate cloth-

ing. It is also an ideal indoor temperature. Water at this temperature furnishes a cold bath which is suitable only for persons of very vigorous constitutions.

*Homigrade.

The Use of "Antigens" in Diagnosis by the Wassermann Reaction: The Necessity for Further Investigation.—Browning and Kenneway (*The London Lancet*) say that they approve the value of adopting a standard antigen in making the Wassermann reaction, the authors point out the limitations of those in common use, which should preclude their adoption as "standard."

The property of a syphilitic antigen is that when mixed with syphilitic serum (heated to 56 deg. C) in suitable proportion and added to fresh guinea-pig serum, it deprives the serum of its hemolytic power.

Attention is called to the evolution of knowledge as to the syphilitic antigen. It is desirable that the quantitative difference between a negative and a positive serum should be as great as possible, as measured by the excess of the amount of complement which the serum-antigen will inactivate, because this is the only index of positiveness which exists. Examination shows that alcoholic heart extracts possess this quality to an outstanding degree, therefore human heart extract has been employed as syphilitic antigen for routine purposes. Other workers have used a similar extract with the addition of cholesterol. Some laboratory workers found that the heart "lipoids" plus cholesterol and certain normal sera led to a great inactivation of complement. They continued to use liver-*lecithin*, feeling that the smaller complement fixation was compensated by the fact that in a series used with a parallel series plus cholesterol, if a given serum caused more complement inactivation, it was an indication of its syphilitic character.

The crude heart extracts have a tendency to cause considerable complement fixation with non-syphilitic sera. On the other hand, such an antigen as that first advocated by McIntosh and Fildes has found much favor. Its popularity is evidenced by the fact that of the four methods of performing the test recommended by the Special Committee from the Medical Research Committee, three employ this antigen. The Committee states: "Of the various extracts which have been recommended at one time or another, that

prepared from heart and reinforced with cholesterol, as recommended by McIntosh and Fildes, will be found simple to prepare and as satisfactory as any in use at the present moment."

Walker and Swift from results of tests believe that the antigenic property of cholesterol-heart extracts is especially evident when testing sera from recently treated cases of syphilis.

The authors have carried out a series of parallel tests employing liver-*lecithin* plus cholesterol, and McIntosh and Fildes' heart extract plus cholesterol. The results confirm their earlier observation that liver-*lecithin* plus cholesterol antigen with many positive sera gives a smaller amount of complement fixation than other antigens; the liver-*lecithin*-cholesterol antigen leads to greater complement fixation than does the heart-cholesterol antigen.

Not only may one antigen differ from another as regards optimum concentration, but the amount of serum necessary to elicit maximum complement fixation may vary.

Results have led to adoption of the following routine in Wassermann tests: For each serum, two series of three tubes are set up: (a) containing liver-*lecithin*-cholesterol (1:8 turbid emulsion) 0.3 cc. plus 0.025 cc. patient's heated serum; and (b) heart extract plus cholesterol (1:30 rapidly mixed emulsion) 0.5 cc. plus 0.05 cc. patient's heated serum along with increasing amounts of complement in each series.

Clearing up the present uncertainty is urged by concentration on study of (1) cases of syphilis with previous positive reaction and present reaction nearly extinguished; (2) untreated cases from congenital syphilitic families; and (3) cases where suspicious or positive reactions have been obtained.

For certainty in diagnosis it is advisable always to use both antigens. If only one is used, all sera should be preserved by freezing that the test may be repeated with the other antigen.

Apparent Deviations of the Wassermann Reaction.—Thibierge (*Presse Medicale*) points out that one should not expect from the Wassermann reactions more than it can yield. The biologists lead one to expect too much, hence most of the errors of interpretation.

The Wassermann reaction is not a chemical reaction; it is the research of the deviation of the complement—the research of properties of substances of un-

known composition existing in unknown doses, but certainly variable, by means of other substances of equally unknown nature existing in the reagent in unknown doses, mixed in this reagent to a quantity of no less unknown substances in proportions independent from those intervening in the reaction.

Besides the antigen contained in the extract of heredo-syphilitic liver, other substances of compound or simple composition give the same reaction or emphasize it; hence have been brought about numerous modifications of the Wassermann reaction.

Errors of interpretation are incredibly frequent, partly owing to the inexperience of some chance operators who are not competent biologists.

Contrary to what some of Ehrlich's assistants thought, one cannot always make injections of salvarsan when the reaction is negative.

It is an absolute fact, fully recognized, that there are periods of syphilis when the reaction is negative, when, on the contrary, paludism gives a positive test.

When chancre is ignored because the reaction is not positive, the practitioner is often confronted with a fully developed roséola soon afterward. But the greatest mischief is that after such wrong prognosis the syphilitic patient is left free to disseminate contagion around him.

In the tertiary period a negative reaction may again be misleading by not revealing 10 per cent of syphilitics, carriers of manifestations in full activity.

On the other hand, a positive Wassermann will be obtained in tuberculosis, for instance, or lupus or psoriasis.

When the disease is confirmed it would be equally foolish to stop treatment because the reaction becomes negative. This would be especially harmful in the delayed affections of the nervous system.

Because of errors created by false interpretations must the practitioner be deprived of means of investigation on which to base his diagnosis?

No, but the Wassermann reaction must not be taken as error-proof, especially in the first three weeks of manifestation.

As to the marriage of syphilitics, most authorities consider there must be a period of at least four years, possibly six, after appearance of chancre, and eighteen months after last accident.

Aberrant Wassermann.—The Journal de Medecine et de Chirurgie Pratiques states that even the best technique may be vitiated by a faulty interpretation. Too great dependence on a negative reaction may result in vicious interpretation, and this is true of the entire course of the disease. Whatever the serodiagnosis, the Wassermann is not a safe guide to treatment, which must be pursued along the old lines—that is, the patient must get his three or four years of treatment, just as if no reaction had been taken; but the latter should, of course, be practiced for statistical purposes. This doctrine is applicable only to the first years of the disease. In ancient syphilis diagnosis by the Wassermann may be the basis of treatment. To use the Wassermann on a syphilophobic as a means of convincing him of his freedom from the disease should not be tolerated, because of the possibility of swindling the patient. In regard to permitting marriage, Wassermann tests should be excluded and no marriage sanctioned until six years after infection and eighteen months after the latest symptoms. This is the general rule, but the period may be reduced to three years in certain cases kept at the start on intensive treatment with a series of negative reactions.

Safeguarding The Weak Heart.

The sufferer from chronic heart disease needs constant attention to his digestion and nutrition. An attack of indigestion or a slight "falling off" in the nutrition may so increase the burden on an hypertrophied heart that its compensation may be lost forever. At the first sign, therefore, of digestive trouble or Glycerine Tonic Comp. should be administered in usual dosage. Its therapeutic action is promptly manifested, and the effect of this dependable tonic in restoring to normal activity, reduces without delay the stress under which a weak and defective heart may otherwise be forced to labor.

In addition to the important service it thus renders by stimulating vital functions throughout the body, Gray's Tonic Comp. acts directly on the heart, imparting tone to the cardiac muscle and aiding and supporting its action.

To sum up the effect of Gray's Tonic Comp. in the treatment of cardiac patients, it is evident that it not only increases the power of the heart, but materially decreases the "load" it has to carry.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

SOUTHERN MEDICAL ASSOCIATION TO HOLD ITS 13TH ANNUAL SESSION AT ASHEVILLE, N. C., NOV. 10-13, 1919.

Striving always to develop the best in Southern Medicine and Surgery, and wisely subordinating all else to that single ideal, the Southern Medical Association has within its thirteen years of active useful life accomplished much for the good of the profession, and its continued success and prosperity is now reckoned among the established facts in medical society organization.

Not only do the prevalent diseases of the South have their own special and peculiar characteristics requiring special study at close range for the making of doctors skilled in their diagnosis and treatment, but it may be said with equal truth the medical gentleman of the South is a type that grows to its finest fruition in the home soil, and while there are many, too many perhaps, medical societies now in existence, this great association has a distinct and peculiar mission to fill.

The annual sessions of the separate state medical societies of the South have each their more or less special localized interests and very properly command the attendance and continuous interests of all doctors who really love the profession, likewise at the other end of medical organization, the great national organization with its rallying of strong men from every coast and clime of our great nation has many features that attract and accomplish the consideration of all well-rounded men of the profession. Neither of these are in any degree occupying the special field the S. M. A. fills, and it can be truthfully said that there exists an imperative necessity for the continued activity of this great annual gathering of the choice spirits of the best in the Southland's profession.

Closely allied in many ways with the distinctive features of Southern medical and surgical problems are certain sociologic subjects that will naturally from time to time engage the careful consideration of the leaders of this society. And

in passing, it is a truism to say that of all men of the South best fitted to possess, formulate and express ripened opinions and convictions on such problems peculiar to the South and her people of different races, the practicing physician or surgeon ranks first. With the large attendance it was found necessary from time to time to increase the number of sections, and it is more than likely that sooner or later, additional sections will be provided where some of the well conceived views of thoughtful leaders of the profession may find voice along lines not strictly professional, but which most intimately concern the brain of every patriotic white physician in our country.

That the Asheville meeting will be a success is already more than manifest. The splendid character of the princely president, the talented Barker who though Canadian born, has been so long and intimately connected with the best of medicine in Baltimore, the energy and perspicuity of the untiring Secretary Seale Harris of whom it may be truthfully said his early visions of a great society, a strong and virile membership, rallying to the support of the distinctively best in Southern medicine has been no idle dream, but is today a magnificent realization—the labors of these men and their able associates in the various sections have made a program unsurpassed in its attractiveness and its excellence as well.

As for the social features, Asheville, and the Buncombe County Medical Society may always be trusted to stand forth as representative of attained ideals in men and medicine. A glance at the committees with a personal knowledge of what these men stand for in the "Convention City of the South," shows to one who knows them, that the social activities will be just right.

Hotels, famous the world over for their capacity to serve and to please, will care for the hundreds who will attend, and the fact that the 1918 session was, on account of war conditions, plus influenza activities at that time, deferred until this year will only heighten the desire of the profession of the South to attend this great gathering. More than fifteen hundred are expected, and in the internationally famous Battery Park Hotel, Swanannoa, Langren, Margo Terrace, Manor, Grove Park, and numerous other hostelryes, will find accommodations unsurpassed amid beautiful environs in the scenic skyland of Carolina and material comfort for the inner man.

The following committees represent the profession at Asheville:

Dr. H. H. Briggs, general chairman.

Reception: Drs. W. P. Herbert, chairman; W. L. Dunn and C. L. Minor.

Finance: Drs. J. W. Huston, chairman, Eugene R. Cocke, Dan Sevier, C. P. Ambler.

Exhibits: Drs. A. W. Calloway, chairman; P. F. Eckel, Jere E. Cocke.

Selection meeting places: Drs. F. W. Griffith, chairman; C. C. Orr, L. W. Elias, W. J. Hunnicutt.

Hotels: Drs. M. H. Fletcher, chairman; A. T. Pritchard, B. R. Smith, R. C. Scott and W. L. Grantham.

Entertainment: Drs. C. V. Reynolds, chairman; M. L. Stevens and J. L. Adams.

Publicity: Drs. C. H. Cocke, chairman; C. D. W. Colby and P. H. Ringer.

Meetings of these various committees are held frequently and everything will soon be in readiness for the sessions.

CARDIAC DYSRHYTHMIA AND DIGITALIS.

It is manifestly impossible to put into the space of a page or two, that which will be of much helpfulness in the therapeutic use of digitalis. There is an endless amount of testimony which asserts that digitalis is of great value in the treatment of "heart disease." The legal profession, however, has warned us that testimony, is not always evidence. Cardiac irregularity of rhythm, is easy to detect. But the irregularity may, or may not point to actual cardiac disease. The dysrhythm may be only a symptom. Obviously the claim of specificity and cure by digitalis, must be backed up by evidence, other than the mere fact that the heart recovered its tone while the patient was taking digitalis.

Much medicine has been given upon purely traditional authority. And sometimes with great benefit. So far as is known, it even would seem that the beginning use of some medicines has been through the promptings of the instincts of the sufferers. Instinct though, generalizes, rather than specializes. In this way it has come about that tradition and experience have so educated the mind of the physician, that when he is confronted with the problems of the treatment of a dysrhythmic heart, he naturally thinks digitalis; just as have tradition and experience in the diagnosis and treatment of diseases generally, stored up in the physician's mind the word formula: "When

in diagnostic doubt, think KI." In neither case is the outcome of following the impulse, always altogether bad. Nevertheless, the aim here is to try to be a little more specific, and to try to differentiate between the rhythmic disturbances which may reasonably be expected to be corrected by digitalis, and the disturbances of rhythm which digitalis can not reach.

Whole volumes have been written upon such single subjects as the embryology of the heart; the histological anatomy of the heart; and upon the physiology of the heart; and a glimpse of the workings of these cardiac functions and structures may be had, by studying a few lines of the summing up of such volumes taken from page 171, in Macleod's "Physiology and Biochemistry in Modern Medicine." Macleod says: "The muscle cells of the heart may, to start with, be possessed of a power not only of contracting but also of initiating contraction. It may be that they are partly nervous in character and that only later, when the differentiation is consummated, does the rhythmic power become delegated to the nervous element and the contraction retained by the muscle itself." This is the myogenic hypothesis regarding the bringing about of cardiac rhythmic contraction, and on page 174 he concludes: "Probably the safest view point to take at the present time is that the power of rhythmic contraction is inherent in the cardiac muscle fibers, being most highly developed in the venous end of the heart, and least developed in the arterial end."

With these embryologic and histologic muscle and nerve cells, thus functioning, as his working material, he proceeds to build up an anatomic heart; and following him, one presently gets in one's mind to see a heart made up of individual muscle fibers, and each fiber attached to a single separate nerve; which nerve, however, may at different times carry different kinds of impulses. More than this some fibers are shorter, and some longer. Some fibers are nearer, in point of time, to the center of nervous impulse, than are others. The shorter ones are at the base of the heart, and of course contract first, then the longer ones at the arterial end. Macleod lays down that the fiber bundle of the auricles, and the fiber bundles of the ventricles each has its own center of nervous impulse. But as will be seen, both centers have the same innervation. Thus one sees these two sets of muscles fibers receiving separate nervous impulses so timed that the auricular con-

traction, rythmically precedes the contraction of the ventricle.

As far as it goes, this explains; but still back of the rythm of this embryologic and histologic and anatomic heart picture, that one has in mind, there must be a rythmic "pace maker." A pace maker first, and then a pace maintainer. There must be in the body fluids, that which produces chemical change in the controlling nerve center. There is no life without chemical change. These chemical changes originate and store up the nervous impulse, in the nerve centers. Then after the impulse has reached the necessary tension, it discharges itself along the nerve tract, into the awaiting and prepared muscle fiber. ontraction takes place. Contraction of the fiber supplies assimilate sustenance to the fiber, and the metabolic restoration of fiber excitability, that has been used up in contraction, takes place during fiber relaxation.

The anabolic metabolism in the muscle fiber, which is made necessary by the contraction catabolism, again prepares the muscle fiber for response to another nervous impulse. Thus through chemical changes in the nerve center, there is set in motion the contractility of the muscle fiber of the heart, and through the resulting metabolism there is maintained in the cardiac muscle fibers, the foundation of the cardiac rythm. Restorative metabolism is one of the essentials, of rythmicity. But alone, it is not the pace maker. Neither is the nerve center alone, the pace maker.

So far theer has been considered, (a) the innervated muscle fiber cell; (b) contracting under impulse from the nerve center; (c) which center is stimulated by chemical changes produced by circulating substances and (d) these muscle fibers massed in bundles and forming the auricles and ventricles. All of which is extremely elementary. But a discussion that makes claim to being at all scientific, must deal with elementary principles. And to complete the mental picture of a heart that will account for all of dysrythmic action—that will account for the most of dysrythmia that is met with, it is necessary to go a little further into the elementary nervous structure of the heart.

(To be concluded)

THE MILAGE OF THIRTY-FIVE YEARS OF MEDICAL PROGRESS.

(Continued)

To look back and try to fix the metes and bounds of a medical landmark of thirty-five years ago, is no easier than it is today to point out just what is proven, and what is not proven in any one particular field of medical research. Even the investigators who were living at that time were allowed to fix boundaries only for their own beliefs. Bacteriology was then in a very emphatic manner, asking to be heard. Pneumonia, with all the various names by which the disease had been tried to be simplified and explained, was beginning to be looked upon as an infectious process from some one infectious germ. Of course Shradly discussed the matter, and in the medical editorial world there has never been a greater, than Shradly. Hence a summing up of the knowledge of the time by Shradly, may reasonably be thought of as a fair expression of the knowledge of that time.

Shradly said: "It was long ago suspected that pneumonia was not a purely local disease. * * * Friedlander described a micrococcus which he had found in the alveolar exudation of pneumonia * * * and quite recently Talamon presented his investigations on the same subject * * * the micrococci found by them do not seem to have been identical * * * Talamon did not always find the same organism * * * in view of the discrepancies he did not insist too strongly upon the infectious nature of pneumonia, nor yet upon its direct casual relation to a specific micro-organism. The present drift of experimental pathology is all in the direction of mycology, a field richer in promise than in accomplished result. The investigations here alluded to will not definitely seal the fate of pneumonia to the extent of irrevocably placing it within the ranks of bacterial infectious diseases." And all this about pneumonia was not so very long ago!

There are few if any diseases about the etiology of which, more has been written, than has been written about the etiology of malaria. Hence it naturally follows that of all diseases, malaria has had the most written about it which was wide of the mark. In 1884 Baruch was saying that "malaria" meant "bad air." Colin called it "intoxication telurique." Roberts, "telluric poison." Hirsch said, "It is caused by a miasm from heat and moisture producing decomposition of vegetable

matter." After quoting these authorities Baruch concludes that, "malaria is due to overcrowding of human beings in badly ventilated houses." Sternberg quoting Bartlett, Wood, Aitken that the composition of the poison which has received the name of malaria and marsh miasm is wholly unknown," said "there are many circumstances that favor the view that the etiology of these fevers is connected directly or indirectly with the presence of bacterial organisms of the air and water of malarious districts. But that the bacillus malarie or any other paracitic micro-organism * * * produces the fever, rests upon very slender evidence. Lavarán * * * claims to have discovered quite a different parasite, oscillarie malariae. Richard confirms Lavarán, but for my own part I must confess that I have never found either of these parasites, but have had only two specimens of blood taken during the cold stage of the paroxysm."

He was too much of a scientist to not give investigations full credit, and in his leaning towards the acceptance of Lavarán's contention, he was very near to seeing the problem through. The treatment of malaria was considerably influenced by the various etiologic theories. Enough cases recovered under different treatments to make more or less of reputation for many drugs, but quinin had long before come to be most relied upon. Bence Jones had found quinoidine normally in the human body; and the theory of treatment was to either in some way aid Nature in the production of quinoidine, or to directly put quinin into the circulating fluids of the body. "Biliousness" was considered a complication of malaria, and a condition that interfered with the absorption of quinin. An excessive secretion of bile, and the bile dammed back in some structure or in some organ of the body, constituted the condition known as "biliousness." Much care was given to the correction of this complication. Calomel, and then Epsom, or Glauber, or Rochelle salts were believed to do it. However, there were so many different kinds of malaria that many different kinds of treatment seemed necessary. It did not seem logical that the malaria that came from the miasm of a meadow, could be cured by the same medicine that would cure the malaria from the miasm of a marsh. And too, one marsh had a miasm not only from decaying vegetable matter, but also from decaying reptiles, and insects, and fishes; while another marsh was defiled by the washings of barnyards and from the

soakings of privies. Obviously a very different miasm! Then again there was the more aristocratic malaria—the "town house" malaria;" the miasm of which came from the refinements and luxuries of well built, but badly ventilated houses. So it came about that while quinin was very generally put into all prescriptions, arsenic, or iron, or carbolic acid, or some compound of iodine, or of bromine was added to take care of the particular pollution that the miasm was loaded with.

The Journal of the American Medical Association was then one year old. Its management showed a cash profit of a few hundred dollars from the year's work. There was very little glory in being the editor of the Journal. There was much criticism. The editor resigned, but was induced to hold on for a little longer. The Journal was having the common usual start of all great things.

(To be concluded)

DEMOCRATIZATION OF THE PHYSICIAN.

There is no other one occupation of men that by its every day association so fosters and builds up in its clan, the spirit of true democracy, as do the experiences in the practice of medicine reveal to the physician and build up in him, the very soul of democracy.

At no time during the physician's days work may his mind be pondering over a word formula that defines, and carries the full meaning of the word democracy. Indeed it is quite likely that the physician would not be able to express in words, the soul property which possesses him.

More than likely too, he has never been conscious of the fact that his attitude towards the life and soul of those with whom, in his care of the sick, he has had to do was representative of the highest spirit of democracy. It is possible that he has never given a moment's thought to the meaning of the word, democracy. And yet the real physician, in his work among men, women, and children comes nearer to being the ideal democrat than does any one else.

Democracy is the soul of honor! It is not any one of the hundred degenerative impulses which, paraded ignobly under the name of democracy, are made use of by men either for the getting of easier money, or for the securing of public office. Democracy as felt by the physician, is always a democracy with a big D!

The law of evolutionary human uplift

at work in the mind and heart of a man, is democracy! There are of course, many grades and kinds of mental and moral make-up, which are represented by physicians, just as all brands of morality are represented in men of other callings. In some minds therefore, regardless of the occupation of men, the capacity to harbor and develop the high principles of democracy, is morally impossible. But with an equal number of men of like ideals, more men will become true democrats from the experiences of all that goes with the practice of medicine, than will be developed in any other work in which men engage. Also there will be fewer demagogues, among the physicians.

Democracy is that eternal element, which makes all men akin! This element is sacred to evolution, but man in the exercise of his free-will, may abuse democracy; but the abuse of democracy spells out inevitable punishment to the nation. On the other hand evolution sees to it that the willing sacrifice of self-comfort to the demands of democracy, always levels a man upwards. In his work the physician unconsciously puts himself on the level with his patient, and oftentimes it comes about that when the physician has reached that humanity level, the physician instinctively feels the admonition: "Judge not that ye be not judged." Going to the level of the one who is less fortunate—missing to the level of that which underlies misfortune, lifts the physician to a higher moral level. Thus does practical democracy exalt the physician.

The physician does not go the level of vice, and himself become vicious. But in many cases the intimacies between physician and patient disclose circumstances in the life of the patient, which circumstances operating upon the life of the physician, might have wrecked the physician himself. The physician does not become besmirched with vice, nor does he apologize for vice. In the physical, mental, and moral wreckage of his patient, he sees what vice does; and then seeks to bring about recovery, or tries to mitigate hurts of vice by working upon the evolutionary element—by working upon and with that which the man was before vice degraded him. Such work, is democracy in action.

If one has read this far it has of course occurred to one that democracy has here been spoken of as being two distinct things! Spoken of for instance as on the one hand being "down and out," and on the other hand as being "up and in." And that is the psychologic picture of democ-

racy which is tried to be presented here. However, being "down and out" does not always imply, nor even generally imply the effects of a vicious career. To the real physician pain and suffering always mean exactly the same thing in all cases. And more than that, the physician goes deeper than pathology, and sees the humanity of which he is a part, in distress. The physician appreciates the worth of ancestry, of education, of refinement, and what a well earned honorable place in life means; and yet bigger and higher up than all these, is the evolutionary element common to all humanity, that is down and out.

The study of democracy, is the analysis of the essence of sociologic, and of national life!

Physicians owe to the community and to the state, which grant the medical profession many special privileges, an impartial study of the sociology of democracy. The medical profession should so specifically clarify the meaning of the word democracy; should so educate the thoughtless as to what democracy means to economics; and should so radically show the people just what the sway of democracy means to the social order, as to forever take the word democracy out of the mouth of the prating demagogue.

A demagogue in office, is a symptom of moral disease, or else a symptom of moral ineptness in the electorate. Once the real meaning of the word democracy is in the mind of the public, the mention of the word by the degenerate and unworthy, will immediately throw the light of publicity upon themselves, and drive them into hiding.

Just as pathology lives upon physiology, and as physiology must fight for its very life; just so does demagoguery live upon virtue and decency, and virtue and decency must fight for their very existence.

GERMS IN FLOOR CRACKS.

Of course, no one questions the desirability of extreme measures to effect the utmost in sanitation in hospitals. In this respect, paint plays an important part in maintaining a sanitary condition of the walls and floors.

Particular attention is given to the floors which are frequently varnished. However, there is an important point in the treatment of the floors which is often overlooked. An inspection of the floors in a great many hospitals discloses cracks

between the boards in which all sorts of disease germs may lodge. It is impossible for the most competent and conscientious cleaners to keep dirt from accumulating in these cracks.

This condition can be remedied by using a standard crack filler. The dirt should be dug out of the floor cracks with suitable sharp instruments, filled with crack filler and then the entire floor painted with a good floor paint or varnish. This treatment enables the cleaners easily to keep the floors scrupulously clean and free from disease germs.

ACTINIC ENERGY AS APPLIED TO CERTAIN DISEASED STATES.

There are many things that the eye hath not seen that we say exist. And some of these invisible things possess power of tremendous magnitude.

The wind that can be as gentle as the brush of down, will develop such terrific force that the giants of the forest are laid low before it.

We speak of the electric fluid. But it cannot be seen as it courses along the wires. Yet that wire may be so charged that a man is instantly killed when he comes in contact with it. But through the ingenuity of man, this same current can be so conducted through coils, that not only is it not destructive, but it becomes a therapeutic agent.

A chunk of carnotite ore suggests nothing of value. We remark its yellow color and its crumbling nature. Yet in its heart, ready to be liberated by the aid of chemical reagents, we will find that wonderful element, that some have termed the source of life and to which Madam Curie gave the name radium.

Its high position in the field of cancer therapeutics is hardly suggested by its lowly home, any more than we would suspect the lump of blue clay containing the beautiful diamond.

The student of physics is amazed as he examines this source of actinic energy. He is unable to see these rays of light emanating from radium, except in the dark room, but he has measured their force by means of delicate instruments and by these aids, he has learned that this seemingly innocent and inert substance that looks like brown sand, is capable of sending out light rays of deep penetrating power. He has found that there are several rays, varying in their penetrating power from a millimetre or so of the alpha ray to several inches from

the gamma ray. The physicist seems to have discovered the source and peculiarities of the beta and gamma rays but is unable to tell us why the explosion occurs that causes the alpha ray and sets the whole phenomena in motion.

It has been proven that the two therapeutic rays, beta and gamma have a distinct effect on the life of tissue, particularly certain pathologic tissue, e. g., cancer, hindering its growth and at times permanently causing its destruction.

It has been the popular belief that radium acts as a lethal agent against cancer cells, because of its caustic action. But it should be remembered that this caustic effect is but a small part of the total action of radium.

Throughout the course of the gamma ray through tissue the arterioles in the territory are affected to such an extent that a distinct endarteritis is established. Following upon this is an exudate of leucocytes and lastly a formation of connective tissue. It is quite probable that because of the occlusion of the arterioles, the cancer cells die by inanition.

The progressive surgeon, realizing full well that the knife has not always included all disease cells in his dissection, is coming to look on this actinic scavenger with more and more favor as a post operative aid.

A CALL FOR DOCTORS TO BE READY.

Dr. W. S. Rankin, Secretary North Carolina State Board of Health, has issued a circular letter to the medical profession of the state asking for the enrolling in his office of all practicing physicians who would be willing on call from his office to go to any part of North Carolina and help professionally care for influenza patients in the event of a serious outbreak of the disease during the autumn and winter. The compensation will be the same as paid physicians rendering this service last winter (\$15.00 per day and expenses) at which time a number of excellent physicians, finding themselves able to leave their own communities, rendered the state and its people a signal service in doing this volunteer work in distant communities at times their own locality could spare them. Dr. Rankin is wise in securing such enrollments at this time, and while we trust he will not have to call out the "reserves," it is a measure of prudent forethought eminently characteristic of our efficient health official who so often sets the pace in health activities for many other states beside North Carolina.

SOUTHERN MEDICAL ASSOCIATION, THIRTEENTH ANNUAL MEETING, ASHEVILLE, N. C., "LAND OF THE SKY," NOVEMBER 10-13, 1919.

Monday, November 10th: Section on Urology, Section on Pediatrics, National Malaria Committee (Conference on Malaria), Southern States Association of Railway Surgeons, Conference on Medical Education, Southern Gastro-Enterological Association, and at night a public meeting under the direction of the Section on Public Health.

Tuesday forenoon: The formal opening with the addresses of welcome, address of the President, Dr. Lewellys F. Barker, the Orations on Medicine, Surgery and Public Health, etc.

Tuesday afternoon, Wednesday and Thursday: Section on Medicine, Section on Public Health, Section on Surgery and Section on Eye, Ear, Nose and Throat. Also on these days the American Child Hygiene Association (formerly the American Association for the Study and Prevention of Infant Mortality.)

Tuesday night: A big general meeting early in the evening followed by a reception to the President at the famous Battery Park Hotel. Wednesday night: another general meeting.

A great program, delightful entertainment, beautiful scenery, balmy climate, fine hotels and plenty, reduced rates on all railroads—everything just ideal for this meeting.

Nature of the Pandemic.—Chabas, writing from Valencia, insists that the second visitation of the pandemic in August-October was a malady differing entirely from the first visitation of May-June. He regards the second outbreak as brought from France by returning Spanish and Portuguese laborers. It is best to consider it a pneumonia pure and simple due to a hitherto unknown pneumococcus or filtrable virus. The question of dealing with future epidemics has been left to the distinguished bacteriologist, Ferran, who many years ago anticipated some of the most important discoveries in acquired immunity. With such a man in power it should result in a saving to Spain of 200,000 lives annually from the various epidemic diseases.—*Gazette des hopitaux*.

EDITORIAL NEWS ITEMS

Dr. J. A. Moore has been appointed Instructor in histology at the University of North Carolina.

Dr. Frontis Lentz of Mooresville, N. C., was married to Miss Bonnie Orr of Charlotte, N. C., October 7th, 1919.

Dr. Vance Hasty, formerly of Marshville, has associated himself with Dr. John Hill Tucker of this city and will devote his time to oral surgery.

Dr. Hickman Ray, Raleigh, N. C., recently honorably discharged from the army, has located in Durham, N. C., where he will practice general medicine.

Mr. John D. Rockefeller has given \$20,000,000 for medical education in the United States. It will be distributed by the general education board.

Dr. Robert Thrift Ferguson of Gaffney, S. C., announces to the profession that he will limit his practice to general surgery (including orthopedic surgery), office diagnosis and consultation.

Capt. Benj. K. Hays, Secretary N. C. State Medical Society for a number of years, has been honorably discharged from the U. S. Army and returned to his home in Oxford, N. C.

The South Carolina Medical College located at Charleston, S. C., has opened with a very large enrollment of students. Last year the students numbered seventy-four, this year one hundred and fifty-three.

Dr. L. J. Picot, Littleton, N. C., formerly Secretary and later President of the N. C. State Medical Society, was elected President of the Seaboard Railway Surgeons' Association at the recent annual meeting in Jacksonville, Fla.

Mr. W. H. Williamson, Raleigh, N. C., has tendered \$25,000.00 to the authorities of Wake County, N. C., for a contribution for the starting of a County Tuberculosis Hospital, conditioned on the providing of an institution costing not less than \$100,000.00 with an endowment of a minimum of \$100,000.00. It is thought the necessary sums will be secured and the sanitarium for tuberculosis constructed.

The Secretary of State announces the issuing of a charter to the Carolina General Hospital, Wilson, N. C., authorized capital \$50,000.00; subscribed \$24,000.00; duration unlimited; incorporators, K. C. Moore, H. B. Best, P. P. Lane, E. L. Strickland, all of Wilson, N. C.

Dr. E. G. Ballinger, formerly a citizen of North Carolina, now one of Atlanta's most active physicians, was recently elected First Vice-President of the N. C. Society of that enterprising city. The President is Mr. G. F. Willis, formerly of Waynesville, and Southern Sales Agent of widely sold popular remedy.

The Mercy General Hospital of Charlotte, N. C., is to be increased in its capacity. The authorities of that institution have purchased a lot at the corner of the old Monroe road and Vail Ave., adjoining the old hospital property. We understand that they contemplate greatly increasing the size of that institution.

Dr. J. J. Withers of Davidson, N. C., was recently married to Miss Alice McCoy of this county. He is a graduate of Jefferson Medical College and has an extensive practice in the upper part of the county. Mrs. Withers is a sister of Dr. T. M. McCoy of Mt. Holly and also a sister of the late Dr. McCoy of this city.

Dr. Cyrus Thompson, Jacksonville, N. C., has been appointed by Gov. Thos. W. Bickett a member of the N. C. State Reconstruction Commission, a board of 25 created by recent act of the legislature to examine into and report to the next legislative session on the economic, military, etc., needs of the state with appropriate recommendations.

Dr. R. G. Keiger, Captain U. S. Public Health Service, who has been in charge of the Bureau of Prevention of Social Diseases of the North Carolina State Board of Health since its organization some months ago has resigned and the Board has secured for the vacancy Dr. Millard Knowlton lately in charge of similar work in Montana and Arkansas.

Dr. Thos. Stringfield, Waynesville, N. C., an active practitioner of that place, has recently been appointed by Gov. Thos. W. Bickett, Inspector General N. C. National Guard with the rank of Colonel. Dr. Stringfield occupied this post for a number of years prior to the Great War

and his reappointment since his discharge from the U. S. Army is fitting.

Dr. Baxter Moore, formerly of Charlotte, N. C., and who has recently returned from France, has located in Charlotte. He has his office at 405 1-2 East Trade St. Dr. Moore will confine his practice mainly to surgery. He has had a great deal of experience and is thoroughly competent and we feel sure that he will do well here as a surgeon.

Dr. A. A. Barron, who was formerly in general practice of medicine in this city, has become associated with Dr. J. P. Munroe, at the Charlotte Sanatorium in the practice of internal medicine and diagnosis. Dr. Barron, since his return from overseas duty with base hospital No. 6, has been spending some time in New York City.

Dr. Kemp P. Neal, son of Dr. J. W. Neal, of Monroe, N. C., married Miss Annie M. Clark of Meriden, Conn., on September 27th, 1919. Dr. Neal graduated in medicine at Harvard College two years ago and has since spent a year or more in France with the A. E. F. He will locate in Raleigh for the practice of surgery and will likely establish a hospital there.

A State and County Council called to meet at the State University by Governor Bickett was well attended September 15-20 by county welfare and other officials. The State Board of Health presented various phases and needs of state and local health work and was ably represented by the Secretary, Dr. W. S. Rankin and Drs. E. B. Washburne, G. M. Cooper and Allen W. Freeman, formerly of Virginia but now State Health officer of Ohio.

An immense negro camp meeting at Tucker's Grove, Lincoln county, N. C., was held in the latter part of August and more than fifty cases of a severe type of typhoid fever have developed among negroes attending and drinking from a local water supply of questionable character. Two deaths had resulted up to September 20, and the state board of health appeared on the scene and has been caring for the situation which had passed beyond local control.

North Carolina now has fourteen whole-time county health officers, the three recent additions being Halifax, Robeson and Surry counties which have

voted appropriations sufficient to secure the co-operative financial assistance of the state board appropriations. Dr. W. A. McPhaul, recently doing admirable public health work in Robeson county leaves for work with the Alabama state board of health, his place being filled by Dr. E. R. Hardin, late health officer of Sampson county, Dr. P. C. Carter of Wake county assumes the duties of the post in Halifax, while the new health officer of Surry county is to be Dr. L. L. Williams who for the past year has been engaged in inspection work for the state board of health.

Dr. Beverly Patrick Reese died while on a visit to his daughter, Mrs. John Croll at Middletown, Pa., August 30th, 1919. He is survived by his widow and five children. He was born in Dinwiddie county, Va., in October, 1828. He was educated at Princeton, the University of Virginia and graduated in medicine at Jefferson college, Philadelphia, Penn., and was the oldest living alumnus of Princeton and probably the other two colleges.

He moved to Staunton immediately after the Sectional War. During the struggle he was in charge of the Confederate hospital at Petersburg. After his return from this service he took up active practice in Staunton, Va.

Dr. Reese was one of the most prominent physicians in Virginia. He was the father of Dr. Robert G. Reese the famous eye, ear, nose and throat specialist of New York. Personally and by his great reputation he was well known in North Carolina.

The Eighth District Medical Society of North Carolina was held in Greensboro on September 24th at the O'Henry Hotel. The following program was carried out:

"Pulmonary Tuberculosis," by Dr. J. W. McGehee, Reidsville, N. C. Discussion by E. C. Hyatt, Greensboro, N. C.

"Report of an Interesting Case of Extra Uterine Pregnancy," Dr. Moir S. Martin, Mount Airy, N. C. Discussion by Dr. Chas. Roberson, of Greensboro, N. C.

"Mouth Infections and Their Effect on the General System," by Dr. H. W. McCain, High Point, N. C. Discussion by Dr. S. F. Pfohl, Winston-Salem.

"Report of a Fatal Case of Apuradic Cerebro-Spinal Meningitis of Twelve Hours' Duration," by Dr. W. P. Beall, Greensboro. Discussion by Dr. John W. Rnig, Elkin.

"Hyperthyroidism," by Dr. W. M.

Johnson, Winston-Salem. Discussion by Dr. John B. Ray, Leaksville.

"Simple Influenza," by Dr. W. O. Spencer, Winston-Salem. Discussion by Dr. F. R. Taylor, High Point, N. C.

At eight o'clock in the evening a supper by the Guilford County Medical Society was given at the O. Henry Hotel. The next meeting will be held in Winston-Salem, N. C. Dr. Fred Hanes of Winston-Salem was elected president and Dr. W. M. Johnson of the same city was elected secretary.

The Seventh District Medical Society met at Gastonia, N. C., on the 6th and 7th of October. The seventh district includes the following counties: Anson, Cabarrus, Cleveland, Gaston, Lincoln, Rutherford, Stanly, Union and Mecklenburg. Dr. W. F. Mitchell of Shelby was president, Dr. L. N. Glenn of Gastonia was vice-president and Dr. Raymond Thompson, of Charlotte, was secretary. The local committee of arrangements was composed of Dr. D. A. Garrison, chairman, and Drs. Henry Glenn and Chas. H. Pugh.

The sessions of the meeting were held at the Armington Hotel and began at 8 o'clock Monday evening. After a two hour session a delightful banquet was given the visiting doctors and many witty and brilliant toasts were delivered. The following program was carried out:

Monday Evening, 8 O'Clock.

Invocation, Rev. Dr. Henderlite.

Address of Welcome Behalf of City, Mayor R. G. Cherry.

Address of Welcome Gaston County Medical Society, Dr. S. A. Wilkins.

Response to address of welcome, Dr. L. A. Crowell, Lincolnton, N. C.

Goiter Observations Drawn from 123 operated and 71 unoperated cases (lantern slides), Dr. Addison G. Brenizer, Charlotte.

Some Interesting Radiograms of the Chest, Dr. Robt. H. Lafferty, Charlotte.

Lantern slides, illustrating several interesting cases, Dr. A. Wylie Moore, Charlotte.

Hemorrhage Following Tonsillectomy, Dr. T. C. Quickel, Gastonia.

Anaesthesia in Obstetrics, Dr. J. E. Ashcraft, Monroe.

The Present Status of the Wassermann Reaction, Dr. L. C. Todd, Charlotte.

Corpora Lutea, in Vomiting of Pregnancy, Dr. Oren Moore, Charlotte.

Banquet Armington Hotel, 10:30 p. m.

Tuesday Morning 9 O'Clock.

Future of Stab Wound of Right Auricle—Recovery, Dr. C. M. Strong, Charlotte. Tracoma, Dr. J. G. Johnston, Charlotte. Atresia of Anus, Dr. D. A. Garrison, Gastonia.

Specific Treatment of Hay Fever, Dr. William Allan, Charlotte.

Early Diagnosis of Tuberculosis, Dr. Robt. E. Lee, Lincolnton.

Local Anaesthesia, Dr. William M. Scruggs, Charlotte.

Eclampsia, Dr. E. B. Lattimore, Shelby.

The Selection of Anaesthetics for Ordinary Cases, Dr. J. C. Montgomery, Charlotte.

Effort of Syndrome, Dr. R. F. Leinbach, Charlotte.

The following officers were elected for the ensuing year: Dr. L. N. Glenn, of Gastonia, was elected president, Dr. John R. Gamble, of Lincolnton, vice-president and Dr. Raymond Thompson, of Charlotte, was re-elected secretary. The next meeting will be held in Lincolnton, N. C.

PRELIMINARY PROGRAM

Seventh Session Southern Tuberculosis Conference, Asheville, N. C., Oct. 23, 24 and 25, 1919. Headquarters Battery Park Hotel.

Officers.

Dr. Henry Boswell, President, Magee, Miss.

Vice-Presidents.

Dr. Carroll H. Frink, Jacksonville, Fla.; Mrs. Chas. R. Whitaker, Hendersonville, N. C.; Dr. L. A. Riser, Columbia, S. C.; Mr. C. L. Adler, Louisville, Ky.; Mr. Spencer Talmadge, Mobile, Ala.; Mr. Kendall Weisiger, Atlanta, Ga.; Mr. R. E. Kennington, Jackson, Miss.; Mr. C. T. Abeles, Little Rock, Ark.; Miss Lillian Meyer, Monroe, La.; Mr. Henry Tietlebaum, Nashville, Tenn.; Dr. L. B. McBrayer, Secretary, Sanatorium, N. C.

Thursday, October 23rd.

2 to 3 P. M.

Registration.

3 P. M.

Secretaries Meeting—F. D. Hopkins, New York City, presiding. Subject: This Year's Seal Sale. Elmore Leffingwell, National Campaign Director. Philip B. Warner, Regional Campaign Director.

8 P. M.

Secretaries Meeting—Dr. Henry Boswell, presiding.

Modifications in Community Programs

Based on Recent Experience—Dr. Donald B. Armstrong, Framingham, Mass.

Next Year's Program—J. P. Kranz, Nashville, Tenn.; Mrs. R. S. Phifer, Jr., Jackson, Miss.

Friday, October 24th.

9:00 to 10:00 A. M.

Registration.

10:00 A. M.

Opening Meeting—Dr. W. L. Dunn, Asheville, N. C., presiding.

Invocation by (To be Selected).

President's Address, by Dr. Henry Boswell, Magee, Miss.

Control of Tuberculosis in a Health Resort Town—Dr. L. M. McCormick, Asheville, N. C.

10:30 A. M.

Modern Health Crusade—James P. Faulkner, Atlanta, Ga., Presiding.

Can the Modern Health Crusade Be Simplified? Miss Jessie O. Yancey, Louisville, Ky.

Putting the Modern Health Crusade Across, Miss Erle Chambers, Little Rock, Ark.

Putting the Modern Health Crusade Across, Miss Anne Murphy, Columbia, S. C.

Co-Operation of the Junior Red Cross, F. M. Darnall, American Red Cross, Atlanta, Ga.

(Moving Picture of the Memphis Pageant Modern Health Crusade).

12:30 P. M.

General Luncheon.

National Medical Service, by Dr. H. A. Tattison, New York City.

State Programs: How Much of Last Year's Program Was Accomplished: Miss Erle Chambers, Little Rock, Ark.; Dr. Geo. Eaves, Birmingham, Ala.; Mr. R. H. Hixson, Jacksonville, Fla.; Mr. J. P. Faulkner, Atlanta, Ga.; Dr. J. S. Lock, Louisville, Ky.; Mr. W. L. Cosper, New Orleans, La.; Mrs. R. S. Phifer, Jackson, Miss.; Dr. L. B. McBrayer, Sanatorium, N. C.; Miss Chauncey L. Blackburn, Columbia, S. C.; Mr. J. P. Kranz, Nashville, Tenn.

2:30 P. M.

Child Welfare in Its Relation to Tuberculosis.

National Program (Speaker to be Selected).

State Program, Dr. Hiram Byrd, Atlanta, Ga.

City Program, Miss Eleanor McMain, New Orleans, La.

How the Tuberculosis Association Can Co-Operate. Mrs. R. S. Phifer, Jackson, Miss.

Discussion Opened by Dr. Ralph Greene, Jacksonville, Fla.

8:15 P. M.

Medical and Sanatorium Section.

(Program to be arranged by Dr. Mc-Brayer.)

Saturday, October 25th

9:30 A. M.

The Negro and Tuberculosis—Young Men's Institute.

Negro Organizations for Health, Major R. Moton, Tuskegee, Ala.

State Tuberculosis Program for Negroes, Prof. Ambrose Caliver, Nashville, Tenn.

State Tuberculosis Program for Negroes, Mrs. F. C. Williams, Raleigh, N. C.

City Tuberculosis Program for Negroes, Miss Rosa Lowe, Atlanta, Ga.

Can the Negro Be Cured of Tuberculosis? Dr. J. W. Walker, Asheville, N. C.

12:30 P. M.—Luncheon.

Nurse's Session, Miss Harriet Sherman, Jacksonville, Fla., presiding.

Unit of Tuberculosis of a State Board of Health, Miss Rose H. Ehrenfeld, RN, Sanatorium, N. C.

Red Cross Program of Nursing, Miss Jane de Vrede, RN, Atlanta, Ga.

Co-operation With State Board of Health and Other Agencies, Miss Marian Williamson, RN, Louisville, Ky.

Making a County Survey, Miss Jane Mooney, RN, Jackson, Miss.

Problems I have Met.

(Short Talks by Nurses to Be Arranged for.)

2:30 P. M.—At Oteen U. S. Army Hospital No. 19

The Tuberculosis Soldier.

Occupational Therapy in Tuberculosis Treatment. (Speaker to be selected.)

Teaching Tuberculosis to the Soldier, Dr. Benj. K. Hayes, Oteen.

The U. S. Public Health Service Program, Capt. Knight, Camp Sevier, S. C.

How Can the Red Cross Help? Harry L. Hopkins, Gulf Division, American Red Cross, New Orleans, La.

What the Red Cross Has Done, W. E. Faulkner, Southern Division, American Red Cross, Atlanta, Ga.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods.

BOOK NOTICES

"Prostatic Diseases and Impotency." New and original methods of treatment. Illustrated. George Starr White, M. D., F. S. Sc. Lond. Los Angeles, California.

This book contains 457 pages. The author endeavors to treat prostatic diseases from a medical standpoint.

Price five dollars (\$5.00) prepaid to any address in the United States. Foreign countries five dollars and fifty cents (\$5.50). Cash to accompany order or the book will be sent C. O. D. Published by the author, Geo. Starr White, M. D., F. S. Sc. Lond., 327 South Alvarado St., Los Angeles, Cal.

For the rural practitioner who has not access to a surgeon or has no hospital facilities this volume would be of some value to him. The doctor's claims for cures I think are exaggerated.

"Practical Medicine Series," comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, M. D., professor of physical diagnosis in the Northwestern University Medical School. Volume 11 General Surgery, edited by Albert J. Ochsner, M. D., F. R. M. S., I.L. D., F. A. C. S. Major, M. R. C., U. S. Army, Surgeon-in-Chief Aufustana and St. Mary's of Nazareth Hospitals; Professor of surgery in the medical department of the State University of Illinois. Series 1919. Price \$2.50. Chicago, The Year Book Publishers, 304 South Dearborn St.

Each volume of these series that are published about once a month are complete. They are published primarily for the general practitioner at the same time the arrangements of these volumes enable those interested in special subjects to buy only the ones they desire.

The present volume is especially rich in material that has been produced by the splendid surgeons who have worked with the Allied armies. The number of reviews from other countries is necessarily small because the original articles have not been obtainable.

Practically the entire field of war surgery, together with a considerable amount of reconstruction surgery has been considered, which will make this issue of unusual value. This is especially true also since in many instances the application to

industrial surgery has been brought into consideration. This part, however, will be even more marked in the next issue, because the entire surgical world seems to be intent upon exerting the utmost effort to make the work of reconstruction a permanent blessing to the men who do the world's labor—to compensate in a measure for the losses sustained.

The illustrations are numerous and quite attractive. We value these books very highly and it gives us pleasure to recommend them.

"Progressive Medicine." A quarterly digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College of Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, September 1st, 1919. Owners and Publishers, Lea & Febiger, Philadelphia, London. \$6.00 per annum.

"Milk," by Paul G. Heineman, Ph. D. Director of the Laboratories of the United States Standard Serum Company, Woodworth, Wis., Octavo of 684 pages with 237 illustrations. Philadelphia and London: W. B. Saunders Co., 1919. Cloth \$6.00 net. W. B. Saunders Co., Philadelphia, London.

During a connection of thirteen years with the department of Hygiene and Bacteriology of the University of Chicago, the author evolved a course entitled "The Sanitary Aspect of Milk Supplies." This course included laboratory work in which the student was made familiar with the most important methods for carrying out sanitary milk examinations. Parallel with this work a series of lectures was given covering the physical and chemical properties of milk; the biology of milk, including bacteriology, and methods of producing, handling, and distributing milk. The material for these lectures was gathered from books and a large number of original articles. Thus the foundation for the present book was laid.

The author does not claim that the subject has been exhaustively treated. It is quite probable he says that some of the many monographs have been overlooked, and suggestions from authors of the same will be received with gratitude. He states that a book on milk which would cover the subject to the minutest detail would

be in the nature of an encyclopedia and would suffer in interest for the reader. However, those interested in the milk problem, whether physicians, sanitarians, students, or producer, will find that nearly all the questions occurring to them have been touched upon, and for the benefit of those who wish to follow up any particular avenue in this vast subject a bibliography has been appended to each chapter. This bibliography is sufficiently complete to serve as a starting point for further study.

The illustrations are thoroughly practical and the book makes a very handsome appearance. The book is invaluable to any one who is interested in this subject.

"The Medical Treatment of Cancer," by L. Duncan Bulkley, A. M., M. D., Senior Physician to the New York Skin and Cancer Hospital, etc. Price \$2.75. Philadelphia, F. A. Davis Company, Publishers.

Cancer is still a pressing problem. According to the latest report of the Mortality Tables of the United States the death rate has continued to rise steadily and lamentably, in spite of assiduous and faithful work in the laboratories, and arduous and intelligent efforts of skilled surgeons, who have also made a strenuous propagandism in regard to the necessity of early and complete extirpation.

Dr. Bulkley presents the medical side of the treatment of cancer in a very plausible style and there is no doubt in the reviewer's mind that it would be well enough for the surgeon to look over this book. I am thoroughly convinced, myself, that all cancers are not surgical conditions. The chapter entitled "Cancer as a Non-Surgical Disease" that Dr. Bulkley read before the New York State Medical Association is especially interesting and instructive. No less interesting is the chapter on "Cancer and Civilization." This paper he read before the 42nd annual meeting of the American Academy of Medicine of New York City. It is a book of considerable value and is written by a man of national reputation.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—*Annales des Maladies Veneriennes.*

Miscellaneous.

Practical Technic of the Bacteriological Diagnosis of Typhoid Fever Through Hemoculture.—Tribondeau (Paris Medical) says that vaccination has, since the war, completely altered the bacteriological diagnosis of typhoid fever. Serodiagnosis has been largely replaced by hemoculture. It is a sure means of diagnosis and has the immense advantage of giving positive indications at the very onset of the infection, whereas specific agglutinins are traceable at the end of a week in serum.

The execution of this method is simple and speedy, and within the reach of even the most modestly equipped laboratory.

Concerning specimens, the blood must be collected with absolute asepsis. This is fundamental, since the presence of even one foreign germ would vitiate the results of the analysis. The vein puncture is the best method. The skin is first painted with iodine. The quantity of blood to be drawn (from 5 to 10 cc.) is taken directly in a medium tube in glucosed bile provided with a glass agitator. Once the blood is collected, the tube is closed and revolved until the blood is mixed with the bile medium. This bile medium is obtained from one or several biliary vesicles removed from freshly killed oxen, to which are added 1:100 peptone and 1:100 glucose. This is autoclaved for 20 minutes at 120 deg. C., then shaken and filtered very hot on Chardin paper and finally closed with cotton-wool. Blood is drawn directly into the tube and placed in a temperature of 37 deg. If it has become coagulated it should be smoothed before culture and all clots removed.

The results usually can be read eighteen hours after culture. If the medium remains sterile, the fluid is not modified at all—it may darken a little, but remains homogeneous.

If typhus bacilli have grown, the medium becomes opaque, clotty and brownish. If the germs are paratyphic a great number of gas bubbles gather on the surface and others come up along the length of the glass. So much for the physician; but the bacteriologist needs know more. He will isolate the typhus bacilli to make sure there are no paratyphic bacilli, and if so to determine whether they are A or B, and also if any coli have developed in the hemoculture simulating a paratyphic. All this information is obtained in less

than eighteen hours by a fresh growth of the hemoculture in lactosed lead gelose. In the research for the purity of the germs obtained in primary hemoculture in natural state, the bacilli of the typhic group are most often found in collections agglutinated by the patient's serum. When isolated they are mobile; after coloration by Gram, and fixation by alcohol they present little bacilli with rounded extremities, all Gram negative.

When the hemoculture is impure, a fresh isolation must be made and an identification test undertaken. Sometimes a simple culture on sloping gelose will eliminate the foreign germ. These verifying operations and others could be avoided by raising the initial blood by venous puncture.

In differentiating the paratyphics A and B from the coli bacillus in lactosed lead, one reads results as follows: Medium without gas and not darkened—paratyphic A. Medium without gas but darkened—paratyphic B. Medium with gas bubbles—coli bacillus. When the tubes are examined the microbial layer must be seen in profile.

Observations on Eye Conditions Met with in Malta, 1916-17, Occurring Among British Troops in the Balkans and Malta Garrison.—Maxwell (The British Journal of Ophthalmology) mentions the divergence of opinion encountered among observers of the pathology of sunlight, and gives an account of the ocular lesions seen among the British troops in the Balkans and in Malta. These lesions affected: (1) The Conjunctiva. Cases of persistent hyperemia, cases with chronic enlargement of the lymph follicles, and 3 cases of pterygia, apparently due to irritated pingueculae, were recorded. (2) The Cornea. Cases of superficial and relapsing keratitis due to sunlight and dust. (3) The Retina. Cases of night blindness unaccompanied by fundus defect or any general disease, and one case from the Balkan front, with fundus defects, probably caused by exposure to sunlight.

Further, the author speaks of the unsuitability of albinos and high myopes with thinning of the choroid and scanty amount of retinal pigment, for service in the Near East, in connection with the protective power of the body pigment against the effects of sunlight; he also insists upon the importance of protective glasses needed chiefly in air work and lookout posts near wide stretches of water, and gives the most efficacious types

to be used; airmen's goggles, cutting off actinic rays; dark glasses, to be served out in cases of chronic blepharitis, irritable conjunctivae, etc., although their use in the front line must be limited; Crookes' "A" glass which cuts off 27 per cent of the thermic rays and all the actinic rays.

A survey of a large number of refraction cases was made by the author who drew the following conclusions:

(1) No visual defect, resulting from a refractive error, should cause exemption from military service, and cases of defective vision due to pathological conditions must be dealt with individually.

(2) The prescribing of glasses for men with refractive errors should be avoided, except in cases of medium degree myopes, as a prophylaxis against progression in cases of men required for clerical work or for posts demanding marked acuity of vision.

The prescribing of glasses at the front for night blindness, caused or accentuated, according to many observers, by errors of refraction, cannot be regarded as a practical measure.

In the case of wounded or sick men suffering at the same time from refractive errors, glasses should be prescribed in order to avert headaches and general discomfort. Their use may be discontinued on return of health.

(3) Ambliopia, the result of squint or refractive error, should not cause exemption from active service, as men with amblyopic eyes usually retain good peripheral vision; moreover, they have been accustomed to their condition from early life.

Where the loss of sight of one eye has been sustained recently, the man is unfit for active service, owing to lessened effectiveness.

Some Aspects of Military Ophthalmology.—McKee (British Medical Journal) says that from a military point of view should teach a medical officer to size up his patient, and considerable latitude should be allowed the military ophthalmologist as to who sees to shoot and who sees enough for ordinary purposes.

Unless a soldier's vision is improved considerably by glasses he will not wear them, so there is only one reason which warrants prescribing glasses for a soldier; namely, that, by prescribing glasses, you change him from an unfit to a fit soldier. It is a grave mistake to prescribe them, for when you do you supply him with an excuse which he always has for lining

up on sick parade. It is to be remembered that, in a soldier, complaints of headache or pains of any sort are not reliable symptoms of disease.

During the examination for refraction a variety of defects are found, prominent among them amblyopia ex anopsia. The author has not seen an epidemic of conjunctivitis among soldiers, and very few cases of gonorrheal ophthalmia. Trachoma has almost disappeared as a military disease. Among military symptoms of disease night blindness takes a prominent part. It seems that we may well attribute this complaint or disease in a certain number of cases to exposure, hard work, and great fatigue. Syphilis of the eye is quite frequent. Sympathetic ophthalmia is very rare.

The concussion following modern explosives leads to a great variety of fundus lesions. The injuries are caused by the violence communicated through the bones of the skull, the bones of the orbit, or by air vibration—windage. One of the commonest of these lesions is a condition of traumatic retino-choroiditis, characterized by diffuse cloudiness of the retina, numerous small exudates in the choroid, and fine dust-like opacities of the vitreous. It is identical with retino-choroiditis of secondary syphilis.

One reason only should form the basis of all military operative work—necessity. Dacryocystitis is not infrequently met with. The author very strongly recommends the West operation.

Major Waldron has modified Esser's method of epidermic inlay for remedying distortions of the lid. He makes an incision in the conjunctival sac instead of through the eyelid skin. Major Gillies buries the graft covered mould in the subcutaneous tissues of the eyelid through an incision in the skin, and removes it through that incision. The second method may be termed an epithelial overlay.

Discussion on the Pathology of Gas Gangrene.—McIntosh and McNee (The London Lancet) state that gas gangrene appeared to have been almost unrecognized previous to the Crimean campaign. Its incidence among British troops, declining since the early months of this war, has lately been about one per cent.

The injured tissues seem to provide a suitable nidus for the growth of the anaerobic bacteria present in all cultivated soils, and there is no doubt as to the cause of gas gangrene.

Results of Investigations on Causation

and Treatment. This complication usually develops within the first 48 hours after injury, and its rapidity of spread is striking.

It was insisted by Wallace and Taylor that gas gangrene was essentially a disease of muscle and never developed when muscle injury could be avoided. The spread of gas gangrene in a limb was found to be different whether or not there was an intact blood-supply. The essential factor in the spread was the passing up of a fluid substance in the sheaths of the muscle fibers, causing their death and their invasion by the anaerobic bacilli. Recently experiments on rabbits have shown that the injection of organisms freshly isolated from a human case did not cause gas gangrene unless the muscle was first extensively injured.

In actual war wounds all the most favorable conditions for the development of gas gangrene were provided: the heavily manured soil, the short-range warfare of the trenches causing great laceration to muscle when a bone was struck, and the frequent infection of wounds by cloth, dirt, etc.

Prophylaxis of Influenza.

If we may judge the future by the past, there is likely to be a recurrence this fall and next winter of the influenza epidemic which resulted in the death of nearly half a million persons in this country a few months ago. In the event that this forecast proves true, what can physicians do to limit the spread of the disease and lessen its terrors?

Immunization with a reliable vaccine would seem to offer the best solution of the problem. Clinical reports on the use of preventive vaccine, as published in various medical journals in recent months, warrant this conclusion. Three instances are here cited:

In Cleveland, Ohio, last spring 3427 prophylactic injections of influenza vaccine were given to the employees of a large manufacturing plant. Of those who received one injection, 378 developed the disease; of those who had two injections, but 37 were affected, while of those who received the full course of three injections, only three contracted influenza. Of the whole number attacked, seventeen died. Eleven of these had not been treated prophylactically, while the remaining six had but one injection.

In the Kentucky Medical Journal for May, 1919 (page 199), the editor says: "The reports from some three hundred

thousand cases indicate that the vaccine (Rosenow) decreases influenza, almost entirely prevents pneumonia, and in practically no case where it was used had death occurred."

In the Canadian Medical Association Journal for June, 1919, Major F. T. Cadham, C. A. M. C., reports his observations on the use of preventive vaccine in the influenza epidemic in Winnipeg. He says: "I believe the vaccine used as a prophylactic for the members of the Canadian Expeditionary Force of this district to have been of value. The incidence of pneumonia was less than one-half and the mortality rate less than one-fourth in the inoculated, as compared with the uninoculated, admitted to the special hospital under similar conditions."

Adjustment of Response to Nerve Stimulus in Voluntary Muscles.—Levick (British Medical Journal) bases some conclusions on the results of tests made upon many hundreds of men, and including every grade of nerve injury. Records were taken of the height, rate of rise, and rate of fall of the curve produced by the contraction of a muscle by means of an interrupted galvanic current. In every case the affected muscle was compared with the healthy counterpart. It was found that when a normal muscle was subjected to a series of stimuli of varying strength it responded by a succession of contractions of varying height, but of uniform duration. The duration of the contraction of a given muscle is the same, whether the stimulus is short and sharp or long and diffuse. Slight diminution of the conductivity of a motor nerve by compression or injury causes a slight lengthening in the wave of contraction of the muscles which it supplies. Abnormal and persistent increase in the stimulation of a motor nerve through irritation, leads to a shortening of the duration of the contraction of the muscles supplied. After suture of a nerve and its regeneration the faradic response of the muscle is the first to appear, then the muscle begins to respond to electrical stimulation with a slight shortening of the contraction curve. This is followed by a period of further shortening until, after complete regeneration of the nerve, the muscle contraction curve is lengthened until the normal is restored. The study of the duration of muscle contraction curves promises to prove of considerable value in diagnosis.

Dangers of Misappreciated or Overlooked Microbian Epidermitis. Prophylaxis of Erysipelas, Furunculosis Etc., Through the Destruction of Cutaneous Microbian Nests.—Gougerot (Paris Medical) insists upon the necessity of giving immediate and adequate treatment to microbian dermo-epidermitis, which, if properly attended to, can be cured within a short time; but which, if overlooked, may cause partial or total incapacity of the patient, prevent surgical intervention, develop into erysipelas, etc.

Erysipelas and Chronic Dermo-Epidermitis. In some cases, acute erysipelas causes chronic epidermitis; in others, very slight chronic streptococic epidermitis, such as pityriasis faciei or seborrheic eczema, following erysipelas, determines periodical outbreaks of the disease. Finally, erysipelas also occurs during the development of chronic dermo-epidermitis; the chronic infection, in these cases, develops into acute erysipelas, and the latter, through sensitization, prepares the organism for chronic epidermitis.

Dangers of Sensitization. As was proved by experimental inoculations, sensitization is either local or general. It is, as a rule, stronger in the epidermis surrounding the wound than in the rest of the body. In cases of local sensitization, epidermitis develops chiefly in the affected area, while in strong general sensitization or in a series of local sensitized areas, the whole body may become infected by auto-inoculation. The sensitizing influence of a deep abscess has in some cases caused a recrudescence in local outbreaks of epidermitis.

Prophylaxis of Cutaneous Infections by the Destruction of Microbian Nests. The slightest manifestations of streptococic or other epidermitis should be immediately checked, so as to avoid sensitization of the organism and further acute infectious outbreaks. All cases of chronic dermatosis should be carefully investigated and adequate treatment given.

The treatment for microbian dermo-epidermitis has been described by the author in a previous report. See "Traitement des Dermo-Epidermites Microbiennes de Guerre."—Gougerot, Paris Medical, January 1, 1917.

Bladder Injuries in Wartimes.—Fullerton (British Journal of Surg.) says that injuries to the bladder form a very small proportion of the total wounds reaching the base hospitals. The proportion is about 1:3000 or 1:4000. Prognosis de-

pends to a great extent upon associated injuries. The author's report is based on a series of fifty-three cases, thirty-five nearly 70 per cent, being complicated by injury to the intestines, or bone or both. In twenty-six cases there was an injury to some part of the lower intestine and thirteen of these were also complicated by some bone fracture. Nineteen cases were complicated by injury to the rectum. The small intestine was also injured in six cases.

The mortality of bladder injuries is very high. There were in this series of cases thirteen deaths. The chief causes of death have been pelvic cellulitis, peritonitis and sepsis. The chief sequelae are bone necrosis, cystitis, calculus and stricture of the neck of the bladder.

Colds and Influenza.

The late Theodore Roosevelt once said that this world could not be considered a fit place for any one to live in if it was not a fit place for all to live in. It must be apparent that the prevention of the "common" or recurring cold, and that type of coryza generally designated "grip" or epidemic cold, would go a long way toward making this old world a more livable place.

Rule-of-thumb procedure has never been successful in the treatment of these conditions and related ailments of the upper respiratory tract, and something very essential has been lacking in our preventive measures. Modern scientific teaching holds out the hope that there is now to be had, in prophylactic vaccination and therapeutic inoculations with the appropriate vaccine, a more rational method of treatment and prevention than hitherto practiced.

The practical application of the method over a period of several years has in fact been most convincing. Individuals who formerly suffered from repeated attacks of colds have remained entirely free from all symptoms for several months after vaccination, or have found themselves victims fewer times and with milder symptoms. Physicians who have used the vaccine in the treatment of the established infections find the attacks shortened and symptoms quickly abated after a few doses of vaccine.

It is in the early fall months that these maladies are most prevalent. Recurrences of influenza in various sections of the country have also been predicted for the fall months. The outbreaks will naturally follow in the wake of, or in the

point of incidence be simultaneous with "common colds." The benefits of prophylactic vaccination for the public should therefore be urged by physicians and health officers. The organisms concerned in the symptoms and making up the "malignant symbiosis" of influenza are the same as those responsible for the infections with which we are more familiar and from which we are never free. To build up the individual's resistance against these organisms is rational, since it is the complications of influenza which make this, one of the least fatal of all diseases, one of the most fatal.

It is reported by the Lilly Laboratories at Indianapolis that the demand for its Influenza Mixed Vaccine is increasing materially. This product is especially applicable for the prophylaxis and treatment of influenzal conditions, inasmuch as the organisms entering into its composition were isolated from ante and post mortem cases of influenza from all sections of the country during the epidemic of last winter.

Proper Storage of Biologicals.

One of the most important features in the sale and distribution of biological products is the proper storage of serums and vaccines between the time of final test and shipment to customers.

In addition to the large cold storage capacity at the Glenolden Laboratories for the preservation of biological stocks, ample provision has been made for the maintenance of suitable temperature for biological products in the new Mulford building, Philadelphia, which is being occupied as quickly as conditions will permit.

Two large rooms have been constructed for unfinished and finished stocks, with a capacity of 50,000 cubic feet, in which a minimum low temperature will be maintained. Small vestibule apertures connecting with the foreign and domestic departments permit the delivery of stock without opening the door and affecting the temperature.

Within the finished stock room is a compartment especially designed for the storage of smallpox vaccine, in which a temperature of about 25 deg. F. is maintained.

It has always been the aim of the Mulford Company to deliver biologicals to its distributors in perfect condition, so that if placed immediately in the refrigerator when received by the druggist, ideal results may be expected from their use.

Modern Day Demands.

The demands of the present day doctor are for palatability as well as a therapeutic potency of the various agents brought to his notice.

This demand he now makes of cod liver oil, for he realizes that a drug may be ever so potent but if it is not palatable a great part of its value is lost, for it cannot be given over long periods or to patients with delicate stomachs.

It was in meeting these demands that Cord. Ext. Ol. Morrhuac Comp. (Hagee) gained its great popularity with the medical profession. In its manufacture the essential elements of the crude cod liver oil have been preserved and thus the patient gets the full benefit of the therapeutic properties of the oil without its objectionable qualities. Cord. Ext. Ol. Morrhuac Comp. (Hagee) being a palatable product may be continued over long periods without giving rise to gastric distress. By the same token it is thoroughly acceptable to the most fastidious stomachs.

During 1916 and 1917 the dead and damaged muscle in which gas gangrene could develop was removed by operation as soon as possible. The majority of cases of gas gangrene occurred among men who had been brought to the casualty clearing stations over long distances, or who were too weak to endure operation. When gas gangrene is developing the blood pressure rises at first, and the medical officer may think that the man is recovering.

In the acute spreading gangrenes of limbs, B. Welchii was found by Bull to be the chief organism. An intense toxemia occurred only in the later stages just before death. Other forms of gas gangrene of intense toxic type gave positive blood cultures of the *Vibrio septique*. Bull found an exotoxin produced by B. Welchii, and by injecting this obtained an antitoxic serum.

Restorvin. No physician can fail to recognize in this combination the **Ideal Tonic and Reconstructive**. Each ingredient is the type of its class. **Phosphoric Acid**—Tissue Builder and Nerve Restorer. **Hydrastis**—Tonic to Mucous Membranes. **Albuminate of Iron**—Regenerator of Red Blood Cell. **Calisaya**—Antimalarial, Tonic and Febrifuge. **Glycerine**—Antiferment and Emmollient. **Sherry Wine**—Stimulant and Tonic. The whole combined to form a delicate, appetizing cordial, which agrees with even the weakest and most delicate stomachs.

An Old Friend in a New Form

The physician who has been accustomed to prescribe that well-known and dependable hematinic and tonic, Gude's Pepto-Mangan, will, no doubt, be pleased to learn that it is now available in tablet form, each two tablets being equivalent in medicinal activity to one tablespoonful Pepto-Mangan, liquid. The new tablet form of the preparation is by no means intended to supplant or displace the liquid, but rather to supplement it by furnishing this standard blood tonic in a form especially convenient for travelers, teachers, business men and women, and those who find it inconvenient to carry the liquid from place to place. Pepto-Mangan, in tablet form, is marketed in bottles containing sixty tablets, the contents of each bottle being equivalent in dosage to one bottle of Pepto-Mangan, liquid. We are confident that the physician will approve of and take advantage of this old friend in a new form.

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HYPERTHYROIDISM.*

By Wingate M. Johnson, Winston-Salem, N. C.

In the beginning let me state that I do not expect to make a single new or original observation about hyperthyroidism. The statement has been made that we may expect a marked increase in the number of cases of this disease as a result of the war, the influenza epidemic, and the reconstruction period through which we are now passing—all tending to increased nervous strain. Several cases occurring recently in my own practice have stimulated my interest in this weird malady. It is with the hope of provoking enough discussion to learn something myself that I proceed to tell how little I know about the subject.

Definition.—A disease caused by an increase in the internal secretion of the thyroid gland and characterized when fully developed by abnormally increased metabolism and by rapid pulse, enlargement of the thyroid, fine tremor and exophthalmos.

Etiology.

Predisposing influences.

Sex. More common by far in women.

Age. Early adult life most susceptible.

Heredity plays some part.

Exciting Causes.

Acute infections, especially tonsillitis and influenza. Many believe that hyperthyroidism is often a manifestation of focal infection in various parts of the body.

Nervous influences play an important part—severe depressing emotions, worry, anxiety, fright, excessive fatigue.

Pathology.—The thyroid gland produces an excess of its internal secretion which greatly increases the oxidation of the body tissues and enhances all cellular activities—"driving the cell to death, as it were." There is general vasodilatation.

Symptoms.—The four cardinal symptoms of the fully developed case of exophthalmic goiter are, of course, exophthalmos, goiter, tachycardia and tremor.

1. **Tachycardia.** The rapid pulse is probably oftenest the first symptom to attract attention. The rate may vary from 90 to 160 or more. It is especially marked

after exertion.

2. **Goiter.** Usually both lobes are involved but not equally. The right is apt to be larger. The enlargement is not usually great but nearly always to be found upon close examination. The gland is generally soft. Frequently a bruit is to be heard and a palpable thrill present.

3. **Exophthalmos,** not always present. Varies in degree from a slight prominence to such protrusion of the eyeball that the lid can not close over it. This is one of the last symptoms to develop. Associated with the exophthalmos may be any or all of the three "signs" the names of which I suppose few of us try to remember—viz., failure of the upper lid to follow the eyeball promptly downward, infrequent winking, and deficient convergence of the eye. Riesman has recently called attention to a bruit which is often to be heard when a stethoscope is applied over the closed eyelid.

According to Green, decided exophthalmos is absent in at least 60 per cent of the cases of hyperthyroidism.

4. **Tremor.** There is a fine involuntary tremor of the extremities, best brought out by having the patient stretch out both hands with the fingers separated.

As a student I remember hearing Dr. J. C. Wilson remark that while the exophthalmos and goiter gave the disease its name they were of less importance in making a diagnosis than the tachycardia and tremor.

Other symptoms of minor importance are extreme nervousness, flashes of heat, excessive perspiration, emaciation and mental disturbances—usually depression. Slight temperature may be present in very active forms of the disease. Vomiting and diarrhea may occur. Loss of weight may be strikingly rapid especially when the patient is up and about.

Diagnosis. When the classical syndrome is fully developed the diagnosis is easy. The rudimentary or incipient cases are not always easily recognized. Yet as in tuberculosis the early recognition of the condition is most important for the earlier treatment is instituted the more probable is a cure. Given a patient with a pulse persistently rapid—even above 90—who is losing weight in spite of a good appetite one would naturally think first

*Read before the Eighth District Medical Society September 24, 1919, at Greensboro, N. C.

of tuberculosis. Right along with it, however, one should keep in mind hyperthyroidism and if even a slight enlargement of the gland and a tremor can be found, with or without any of the eye symptoms, one is justified in making a positive diagnosis.

The distinction between hyperthyroidism and tuberculosis in the incipient stage of each is not always easy to make. They are frequently associated, furthermore, so that one should not be content with making a diagnosis of one without excluding or including the other. In both one may have loss of weight, sweating, rapid pulse, elevation of temperature and digestive disturbances. Some points of difference are as follows:

Emaciation is apt to be more rapid in hyperthyroidism, particularly on exertion. One of my patients lost twelve pounds in a five-day automobile trip through the mountains.

The temperature shows less variation in thyroidism—is less apt to have the pronounced subnormal morning ranges.

The pulse is relatively more rapid in goiter.

Appetite. In tuberculosis a rather characteristic early symptom is loss of appetite. In thyroidism it is apt to be abnormally good—the patient's failure to gain indicating the enormously increased metabolism present.

Prognosis is always an uncertain quantity. As a rule better in the rudimentary cases than in the fully developed cases of true exophthalmic goiter. The course is apt to be chronic.

Treatment.

General Considerations. A search should always be made for a focus of infection which should be remedied if possible. In a great many cases the tonsils will be found infected. If so their removal usually has a favorable influence.

The patient should be put to bed and kept as quiet as possible. The diet should be generous but the meat should be reduced and no stimulants allowed. The bowels should be kept well open. For this purpose sodium phosphate is at least theoretically to be preferred as it is supposed to aid in replacing the phosphorus oxidized in the excessive metabolism of the body. An ice-cap over the thyroid for part of the time may reduce its activity. An overactive circulation is present with general vasodilation. Any measure to counteract this does good, not only by diminishing the general metabolism of the whole body but also by reduc-

ing the amount of blood in the gland itself. Hence the advantage of rest.

Drug Treatment. Forcheimer strongly recommends quinine hydrobromide, Gr. V, combined in a capsule with one grain of ergotin, three or four times a day for its vasoconstrictor and sedative effect. This treatment he recommends keeping up indefinitely.

Tincture of belladonna is frequently used to check the thyroid secretion. It also has the desirable vasoconstrictor effect. Its disadvantage is that it increases the dryness of the mouth which is often an annoying symptom of the disease.

Bromides are often useful in very nervous patients.

Dr. David Riesman recommends thyroidectin—which is the desiccated blood of animals whose thyroid glands have been removed—in five-grain doses two or three times a day. He also recommends quinine hydrobromide in very nervous patients. After the patient is a little better he has the gland X-rayed. "From this plan of treatment," he says, "I have seen excellent results—I may say cures." He strongly advocates giving medical treatment a thorough trial before advising surgical intervention.

In cases which do not respond within a reasonable length of time to medical treatment surgery is, of course, to be resorted to and strikingly brilliant results are often seen. The fact that this class of patients, however, are poor risks is warrant enough for giving them the benefit trying medical treatment first. By so doing they can at least be converted into better risks if not actually cured.

Nature of the Pandemic.—Chabas, writing from Valencia, insists that the second visitation of the pandemic in August-October was a malady differing entirely from the first visitation of May-June. He regards the second outbreak as brought from France by returning Spanish and Portuguese laborers. It is best to consider it a pneumonia pure and simple due to a hitherto unknown pneumococcus or filtrable virus. The question of dealing with future epidemics has been left to the distinguished bacteriologist, Ferran, who many years ago anticipated some of the most important discoveries in acquired immunity. With such a man in power it should result in a saving to Spain of 200,000 lives annually from the various epidemic diseases.—*Gazette des hopitaux*.

TUBERCULOSIS PULMONALIS.*

By Dr. J. W. McGehee, Reidsville, N. C.

"Tuberculosis is an infection caused by bacillus tuberculosis, the lesions of which are characterized by nodular bodies, tubercles, and diffuse infiltrations, which either undergo caseation, necrosis, and ulceration, or heal with sclerosis and calcification."—Osler.

The remote causes are an inherited weakened protoplasm, dissipation, and a crippled weakened body following diseases.

I am convinced that we have a soil that is peculiarly adapted to the growth of tobacco, or a different soil that will grow grain or cotton, so we have many varieties of protoplasm, some suitable to the growth of the tubercular bacilli, while other protoplasm will resist the same infection. It is not generally regarded that the tubercular bacilli is transmitted in the spermatozoa or ovum, and is dormant in the offspring for many years, but the protoplasm of the son and daughter is like that of their tubercular father or mother and is a fertile soil for the growth of the specific germ. We have known for many years that anything that will lower our resisting powers as alcoholism, excessive work, worry, loss of sleep, infectious diseases many of which will leave our body weak and susceptible to the growth and development of the tubercular bacillus. It is probable we will have an increase in the number of cases of tuberculosis due to the pandemic of Spanish Influenza last winter.

It will be of interest to you to know that out of three hundred and fourteen men disqualified by Rockingham County Local Draft Board in the first and second registration forty-five per cent or one hundred and forty-four had tuberculosis, of this number sixty-eight lived in town and seventy-six lived in the country. The occupation of the sixty-eight in town is as follows: employed in cotton mill thirty, tobacco factories 7, miscellaneous 31, sixty-nine of the seventy-six in the country are farmers. This speaks well for the hygienic and sanitary conditions of our industrial plants in Rockingham County and shows conclusively that the employees in the cotton mills are healthier than our farmer boys. We have in Rockingham County thirteen cotton mills and three tobacco factories. I can only ac-

count for the larger number of cases in the country as probably due to the fact that they have not had the training and education in the prevention of tuberculosis.

Symptoms: The symptoms of pulmonary tuberculosis are more or less familiar to the general practitioner and are well outlined in all modern text-books so I am not going to take up your time or try your patience by enumerating all symptoms, but wish especially to call your attention to and if possible to impress you of the early but significant symptoms:

History: First obtain personal and family history, inquire carefully as to pulmonary hemorrhage, remembering about ninety-nine cases of pulmonary hemorrhage out of a hundred means tuberculosis. Other early but significant symptoms are a subnormal temperature in the morning, and a rise of temperature in the afternoon, which if persistent for ten days and unaccountable for by other disease, especially infected teeth and tonsils should arouse your suspicion and cause you to inquire and examine further into the cause of same. We often have patients to walk into our office and give us a history of being tired and weak; they further state that they have lost in weight, have a slight cough, poor appetite, have taken cold, are a little hoarse, and they think they need a tonic. These symptoms should at once make us think of the railroad crossing sign: "Stop, Look, and Listen."

The patient is then told to remove all of his clothing so the chest is bare and you can proceed with your examination, which may or may not show symptoms of pulmonary tuberculosis.

I wish to call your attention to two other symptoms: low blood pressure and arterio-sclerosis in the young.

Whenever we have the above history of symptoms we can be reasonably sure of our diagnosis, regardless of the sputum, the physical findings in the chest, or the X-ray reading.

Treatment: Prophylactic:

We should at all times endeavor to regulate our habits so as to give us the best of health, to do the things that will give us life, vigor and muscle and to abstain from those things that devitalize our body.

The State Board of Health has recently required all physicians to report tuberculosis, which enables our health authorities to reach all infected people with a bulle-

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tin, in which will be found many valuable suggestions as to the prevention of tuberculosis.

Eugenics: It is now customary and proper to quarantine all infectious diseases except tuberculosis, yet we know and have known for many years that tuberculosis is an infectious disease.

The question of marriage should be considered and occupy first place in the prophylaxis of the great white plague. Under the present condition we allow people suffering of tuberculosis to marry and their offspring is born with a predisposition to the disease and is bred in a hot bed, heavily sown with living active tubercular germs. The opportune time is at hand to have a law passed preventing people to marry that have or have had tuberculosis the past ten years.

Curative Treatment:

It has been stated by many good authorities that about eighty per cent of people who have obtained the age of twenty-one years, have had tuberculosis and most of these cases have undergone a spontaneous cure without the infected person knowing they ever had the disease.

There are many cases of mild infection that can be cured by a proper diet, rest and open air treatment. The cases that give us most concern and trouble are those cases where the person so infected is not able financially to obtain the proper diet and rest. These cases with the advanced incurable, are the kind that expectorate most, hence liberate thousands of active germs each day.

We have a state Sanitorium that is doing good work, but their capacity is limited, hence we must seek other places that these unfortunates can be isolated and cared for without cost if necessary to the person so infected. I hope we may soon have a good tuberculosis sanitarium in each county under the control of county and state or possibly the United States.

I am going to suggest that the citizens of each county in North Carolina appropriate sufficient funds to build a modern sanitarium in each county and have same maintained by county and if possible, state and United States.

The question is a grave one and I hope we, a great growing nation will soon solve the problem in the right way—the American way.

FOCAL INFECTIONS OF THE MOUTH AND THEIR EFFECT ON THE GENERAL SYSTEM.*

By H. W. McCain, High Point, N. C.

The real significance of mouth infections has been made apparent only within the past few years through the bacteriological studies and experiments of laboratory workers. The investigations of bacteriologists have proved the existence of pathogenic organisms in such infections as alveolar abscesses, chiefly the staphylococci, while other bacteria are sometimes associated.

Brophy, in his recent extensive paper on "Oral Infections," says that the staphylococcus, streptococcus, pneumococcus and micrococcus catarrhalis are usually found in all mouths, both of young children and adults, though of course infection does not always occur. Where the mouth in unclean infection may result, and the local effects, when the infection is mild, may be slight.

"The mucous membrane of the mouth, especially that covering the tongue and pharynx, becomes reddened and slightly painful. If this condition continues the salivary secretion is diminished, thus allowing the tongue to become markedly coated, and the mouth to have a bad taste. The tonsils may enlarge and protrude into the pharynx. This predisposes to a follicular tonsilitis. The gums may become hypertrophied or atrophied. The irritation of the collection of bacteria between the teeth and gums causes an inflammatory hypertrophy of the gums. If the disease is widespread there may be a general hypertrophy. Atrophy is frequently present in dento-alveolitis.

"Other local effects about the teeth are abscesses which may produce necrosis of the bone to a greater or less extent. The pus may escape in any of the following ways:

"(1) Through the lingual surface and form a sinus at some point not easily observed.

"(2) Through the tuberosity of the bone into the pharynx. This opening may not be discovered and a catarrhal condition of the pharynx may be treated indefinitely without a knowledge on the part of the physician of the real character of the disease.

"(3) Through the floor of the orbit and form a sinus upon the cheek. Upson describes paralysis of the nerve supplying the eye as a result of infection of the teeth.

"(4) Through the Antrum of Highmore.

"(5) Through the external alveolar plate.

"(6) Between the tooth root and socket.

"(7) Through the external alveolar plate opposite the apex of the root affected.

"(8) Through the cheek at the angle of the jaw.

"(9) Into the mandibular canal, thus becoming a source of irritation to the nerve and exciting intense neuralgic pain.

"(10) Through the soft parts beneath the chin.

"The glands in the neck are frequently involved, especially at the height of infection.

These sometimes go on to suppuration and then it becomes necessary to incise them. Other local affections, such as stomatitis, periostitis, sinus infections, inflammation and infection of the tonsils and pharynx may also be seen."

"The treatment of oral infection is divided into prophylactic and active treatment. **Prophylaxis** should commence with the nursing infant and should never be relaxed. The epithelial surface of an infant's mouth should never be handled roughly, as infection may take place readily through the denuded membrane. The mouth may be flushed with boracic acid, but it is more essential to keep the breasts or rubber nipples thoroughly clean. If these details are followed carefully it is noticeable that gastro-intestinal disturbance is practically absent.

"During dentition it is essential to keep the teeth clean, and if caries should develop, a dentist should be consulted and the cavity properly sterilized and filled. It is essential that the child be taught to breathe through the nose, as bacterial and dust particles can be handled better there. Anything which interferes with nasal breathing should be corrected.

"In an adult the condition of the mouth should be as rigidly cared for, if not more so, than in children. In smokers, especially, and in those who use alcohol it is essential that the teeth be kept thoroughly clean and filled. Filthy mouths have accounted for many cases of pneumonia or with death following operation. Just because an operation in an emergency is no good reason why a filthy mouth should not receive at least emergency treatment.

"The active treatment consists in restoring the parts to normal conditions. The course pursued by the oral surgeon

must necessarily depend upon the conditions present. Thus, if the oral infection be a dento-alveolitis or an abscess of a tooth, the treatment should consist in alleviating the infection. When the condition is mild and consists of a carious tooth, immediate attention should be given to the diseased part in order to prevent further destruction. If taken early, the general symptoms will not have an opportunity to become marked.

"If the mouth conditions are severe enough to produce general symptoms, the treatment should be directed toward these. This does not mean, however, that one should neglect the primary cause. It is well to look to the throat and nasopharynx for diseased tonsils and adenoids, especially when the teeth or adjacent parts are not markedly involved. It is inadvisable to attempt to remove tonsils and adenoids when these are acutely infected. They should be treated locally and the patient should receive such general treatment as necessary. This consists usually in active elimination continued over a period of three or four days. Most of these patients are markedly constipated and it is surprising the relief given them by active cathartics.

"Logan, in a recent paper, briefly outlines the appropriate procedure to pursue when a patient is suffering from a disease possibly caused by a chronic oral infection. He states, "The appropriate procedure is to have radiograms taken of all the teeth and their supporting structures, and of the jaws for partially or totally impacted teeth. If questionable areas are found, blood examinations should be made. Then, if the physician with the patient will consult the family dentist or oral surgeon to determine if the infection can be controlled with retention of the teeth, or if extraction, with or without curetment, is indicated, and also ascertain the important information whether or not any tooth contains an infected pulp which the radiogram would not reveal in any case, then and then only will the patient's welfare in so far as the mouth and teeth are concerned be properly protected." Curetment is in many cases just as important as extraction.

During the last few years the conviction has grown continually stronger among physicians, as well as dentists, that the human mouth as a gathering place and incubator of pathogenic germs performs a significant role in the production of varied disorders of the body, and that if many diseases whose origin is en-

veloped in mystery could be traced to their source, they would be found to have originated in the oral cavity.

The mouth and buccal secretions are to the remainder of the alimentary tract as the first cog-wheels in an elaborate mechanism. Should the cogs of these primary wheels be broken or become coated with some corrosive material, it is clear that the whole mechanism must sooner or later be disastrously affected.

The secondary effects of oral sepsis upon other organs and systems may be produced in the following ways:

1. By local extension to adjoining structures and organs.
2. Absorption of toxins and organisms by the lymphatics.
3. Infection of the mucous membrane at some point lower down the alimentary tract.
4. Absorption of toxins and bacteria into the blood-stream.
5. Inhalation of organisms into air passages and lungs.

The diseased conditions, then, resulting from the above infections, include periostitis, and necrosis of the jaw-bones, "Angina Ludovici," empyema of the antrum, inflammatory eye conditions, cavernous sinus thrombosis; lymphadenitis; septic and chronic gastritis, enteritis, appendicitis; chronic toxæmia, arthritis, septic and pernicious anaemias, and septicaemia.

The human mouth is a habitat and breeding ground of many bacteria which are the cause of definite pathological conditions. They have here all of the elements necessary for their existence, food, moisture and warmth. They are found between the teeth, under the gums surrounding each tooth, in cavities of carious teeth, under ill-fitting crowns, bridges and plates, defective fillings, pyorrhea alveolaris pockets, tonsils and abraded pathological mucous membranes. Among the germs that frequent septic mouths are the following: bacillus tuberculosis, bacillus influenza, bacterium coli communis, pneumococcus Friedlander, pseudo-diphtheritic bacillus, staphylococcus albus, staphylococcus citreus, streptococcus, Vincent's bacteria and others.

After referring to the passage with the food of the discharges of a septic mouth into the stomach, Adams adds:

"During the resting period, when hydrochloric acid is not being secreted, the discharge and contents of septic mouths passes into the stomach, producing a streptococcus and staphylococcus gastric infection. The contents of such a stom-

ach pass into the small intestine and repeat the process there with the initiation of enteritis or septic enteritis and affect the gall ducts, kidneys, spleen and pancreas * * * The long continued absorption of perverted digestion, decomposition and putrefaction, along with bacteria of low toxicity, produces and contributes to headache, malaise, lassitude, sciatica, epilepsy, eclampsia, dermatitis, various of nervous diseases, chlorosis, anemia, nephritis, arteriosclerosis and rheumatic fever.

Uncleanliness of the mouth is probably the indirect cause of more bodily disease than any other source.

Among the diseases mentioned that arise from carious teeth are the following: acute and chronic enlargement and supuration of the cervical glands, chronic and follicular pharyngitis; rheumatoid arthritis; anaemia and dyspepsia, with all its complications and sequelae.

Alveolar pyorrhea is a most universal disease and one that causes the loss of more teeth, and probably more general discomfort from the large number of complications, than any disease in the category of pathology pertaining to the mouth. * * * There are hundreds of theories as to the cause, but my personal belief is that it is due solely and alone to a local infection with bacteria, whether some specific bacillus, I do not know. The theory that it is a constitutional disturbance can not be proved or substantiated from any of its symptoms.

With regard to the influence of this disease upon the general system, the mouth and throat being the entrance of all that sustains life, we must get rid of any condition that prevents the healthy performance of its functions, and this cannot be if the air we breathe and the food we eat be passed through a mixing chamber lined with 30 square inches of the most virulent germs, foul pus and decayed food—all maintained at the best temperature for the breeding of germ life, and this is the condition of the mouth found in these cases of alveolar pyorrhea.

Physicians with patients who are not able, or will not have treatment for pyorrhea, and where the case is incurable, should insist upon the extraction of such diseased teeth as a safeguard against many diseases of the general system, as well as a protection to some extent against many diseases of the general system, as well as a protection to some extent against the contraction of contagious diseases. It has often happened that the

cure of pyorrhea alveolaris alone, without other treatment, has resulted in the disappearance of such conditions as sore throat, tonsillitis, digestinal disturbances, headache, neuralgia, and kidney affections.

The mouths of these patients had furnished for absorption, quantities of toxins which had undoubtedly lessened the resistance of the tissues, entered the blood and impaired the function of structure of distant organs.

The relief of such conditions lies in the proper treatment of the teeth by a skillful dental surgeon, one who thoroughly appreciates the value of mouth asepsis and who will instruct his patients in the proper care of their teeth in order to secure permanent cleanliness. The remedy also includes the intelligent co-operation of physicians, who should understand the uselessness of treating a patient for gastric and intestinal troubles and expecting a cure from drugs alone as long as the sufferer's mouth is a breeding-place and harbinger for various types of pathogenic bacteria.

Dr. Edward H. Baker, writing in the June, 1912, Dental Cosmos on "The Natural Field of Dentistry," gave a list of 125 different diseases that were traced by scientific men to dental and oral disorders, almost all the authors quoted being graduates of medicine.

Daland, writing in May, 1916, on "Constitutional Conditions Caused by Oral Sepsis," refers to the following diseases; boils and carbuncles, septic polyarthritis, endocarditis, myocarditis, osteitis, anemia, bronchitis, pneumonia, pancreatitis, cholecystitis, cholelithiasis, indigestion, peptic or duodenal ulcers, trigeminal neuralgia, as well as neuralgias in various parts of the body, while iritis, phlebitis, skin eruption and pruritus sometimes result from septic conditions of the mouth.

Sinclair Tousey, in a recent article, (Dec. 30th, 1916) names a number of lesions and symptoms that are secondary to infection connected with the teeth or the pneumatic sinuses of the face, among which are the following: tuberculosis, neurasthenia, chorea, neuritis, sciatica, paroxysmal cough, cardiac lesions, eye diseases and spinal cord lesions. He says in conclusion:

"A putrescent mass in the pulp chamber of a tooth may exist for months or years, because the walls of the cavity cannot collapse and are incapable of throwing out granulations and eventually filling the cavity with healthy tissue, like the

natural process of cure in an abscess in the soft tissue of the body. This putrescent mass may constantly poison the bony tissues surrounding the spinal foramen sufficiently to produce an effect clearly recognizable in a radiogram.

The X-ray, therefore, should be used as an important aid in the diagnosis of effections of the teeth or the pneumatic sinuses.

New Prospects in the Field of Therapeutic Immunization.—Wright, in The London Lancet, points out that vaccine therapy is usually unsuccessful in cases in which the infection is producing continued constitutional disturbance and recurring pyrexia; where there are unopened abscesses or sloughing wounds with corrupt discharges; and generally in long standing infections. The writer enters into a long dissertation with illustrations of his contentions drawn from various experiments in vitro, in all of which he amplifies upon these three types of condition which commonly fail to respond to vaccine therapy, and in which he attempts to explain the several causes of the failure. In the successful suture of infected wounds three conditions must be met: first, freedom from pus having a reduced or lost antrityptic power; second, the elimination of all dead spaces; and last, the presence of good leucocytic emigration into the wound. It is the full meeting of these three conditions which probably accounts for the greater success of delayed primary suture over immediate suture. It has been possible to enhance materially the bactericidal power of serum and lymph both by the administration of a suitable vaccine and by the treatment of the serum or lymph with vaccine in vitro. It has also been shown that when the body's capacity for the elaboration of antibodies has been exhausted by the infecting organism, its immunity response may still be stimulated nonspecifically by the administration of vaccines made of other organisms than the infecting one. Finally, in desperate cases hope may be offered by so called immunotransfusion, or the transfusion of blood which has been treated with suitable doses of vaccines in vitro. These, and various other, possibilities have been opened up by intensive study of the conditions met with in war wounds and it only requires further elaboration to make many of them practicable measures for therapeutic application.

REFLEX SYMPTOMS IN GALLSTONE DISEASE.

By Samuel Weiss, M. D., Attending Gastro-Enterologist to the Philanthropin Hospital,
Lecturer on Medicine Nurses' Training
School, Fellow of the American
Congress on Internal Medicine.

The symptoms associated with the liver, gallbladder, and ducts, in many cases resemble those of the stomach so closely that there is often a difficulty in differentiating the one from the other. This will be understood when it is borne in mind that developmentally the liver and its appendages are an outgrowth of the digestive tube immediately below the stomach. The region in the cord from which the nerve supply passes is at, and immediately below, the region of the stomach supply, from the seventh to the ninth thoracic; so that with severe stimulation the irritable focus in the cord invades the nerve supply of the stomach. As in stomach affections, the reflex phenomena appear in the epigastrium, but in gallbladder affections the hyperalgesia is most common on the right side, and the upper part of the right rectus muscle becomes contracted. The symptoms also tend to spread to the right side and low down in the abdominal wall. In addition to the thoracic nerve supply the liver and gallbladder and ducts are also supplied by the phrenic nerve (third, fourth and fifth cervical) and by the vagus.

The reflex symptoms in affections of the liver itself are often not very distinctive, while those of the gallbladder and ducts are frequently violent and very characteristic. This difference is due to the fact that the former is a glandular structure, while the latter contains non-striped muscular fibres which, may provoke the most violent sensory phenomena.

The pain in gallstone disease varies much in severity. It may begin with a sense of uneasiness in the epigastrium, or over the lower ribs on the right side. A small area of cutaneous or muscular hyperalgesia may be detected somewhere in the region in which the pain is felt, and also in the upper portion of the right rectus. This muscle may become more or less contracted. These symptoms may be slight and variable, and continue for months or years, or the patient may be seized suddenly with violent pain, with or without these preliminary symptoms. The pain in the majority of cases of gallstone colic is situated in the middle line,

about the lower part of the epigastrium. It may come on gradually and remain for an indefinite period, sometimes varying slightly in intensity. From this place it tends to spread to the right side, and may be felt with great severity below the edges of the ribs. Sometimes it may extend round the back, and be felt most severely over the ninth and tenth ribs. In rare cases the pain may only be felt in the back.

The pain, intermittently slightly, may remain for many hours, unless relieved by a sedative. Frequently after the subsidence of the pain the skin and muscles of the upper part of the right side of the abdomen become very tender to touch, and the muscles hard and contracted.

In great many cases, after the subsidence of the attack, the hyperalgesia may persist for several weeks, and, during this period, severe attacks of pain are very liable to be provoked, so that the patient is scarcely able to move about.

In a small percentage of cases pain, sometimes of great severity, is felt on the top of the right shoulder, striking down the outside of the arm. It is very necessary to recognize the relationship between pain in this region and gallstones. I have known patients in whom there was this pain in the shoulder and in the arm treated for years for neuritis, and the passage of a gallstone has been followed at once by relief. In many cases this shoulder pain is not very severe, and the patient may not refer to it. If, however, inquiry be made, the patients frequently declare they have had pain in the right shoulder, which they thought was rheumatic. When this shoulder pain is severe and the chief complaint, if due to gallstone disease a careful search will reveal evidences in the upper part of the abdomen, in the hyperalgesia of the skin, in the contraction of the muscles, and in the history of the patient which leave little doubt as to the cause of the shoulder pain.

In persistent dyspepsia and heart-burn, the question of gallstones should always be considered. One frequently sees patients with a history of acute gastritis of which the symptoms are described as attacks of severe pain in the pit of the stomach, or cramp of the stomach, followed by a period when ingestion of food causes pain. Such a history will, in the majority of cases, be found really to have been due to gallstone colic, with the subsequent condition of hyperalgesia associated with an irritable focus in the cord.

Nausea and vomiting are frequently accompaniments of gallstone colic, and their occurrence with the pain in the pit of the stomach might seem to confirm the conclusion that the case is one of gastritis, or cramp of the stomach.

It is only in a small proportion of cases that jaundice is present in gallstone disease. If the stone is situated in the common duct, or can cause pressure on the common duct, so as to obstruct the channel, then jaundice arises. When the jaundice is so slight that it is difficult to determine whether it may not be due to a sallow complexion, a careful inspection of the sclerotic may reveal a faint tinge. It may be necessary in cases of doubt to examine the urine or blood for minute traces of bile pigment.

It is only in very rare cases that gallstones can be detected in the gallbladder. It can only be done when the stones are so numerous as to cause a tumor, or when the stones cause the gallbladder to become distended with fluid. This can only happen at a late stage in the disease, and when all the associated reflex phenomena have disappeared, for the presence of hyperalgesia means also the presence of a lively muscular reflex, which effectually prevents the hand reaching the gallbladder. When the abdominal muscles are lax the distended gallbladder may be felt as a tumor, and, in rare instances, the stones have been palpated. The liver is sometimes said to enlarge and become tender. As, however, the writers who describe this have not appreciated the association of this so called tender liver with contracted muscles, this observation needs to be verified. For my part I have never been able to satisfy myself as to a slight liver enlargement when there is hyperalgesia and contracted muscles. The muscles are so tender on pressure and contract so firmly that it is impossible to palpate the liver; the percussion note also becomes altered with a contracted muscle.

In the great majority of cases of gallstone disease there is no fever except, it may be, a slight rise at the time of an attack of colic. In some cases there is an associated inflammation of the gallducts, and, as a consequence, febrile attacks may occur of a very characteristic type. These are generally very sudden in their onset and in their subsidence. The patient begins to feel chilly and shivery, and when his temperature is taken it will be found to be considerably raised 101-104. He may have rigors. In the course of one to

three days the temperature returns to normal.

In more advanced stages of cholangitis the temperature may remain continuously above normal with frequent exacerbations. With the formation of pus the temperature usually remains continuously high.

In all obscure cases of intermittent temperature the possibility of gallstones should be considered. Except malaria, there is no disease which gives such characteristic febrile attacks. In many cases slight jaundice can be detected.

616 Madison Ave., New York City.

An Old Friend in a New Form

The physician who has been accustomed to prescribe that well-known and dependable hematinic and tonic, Gude's Pepto-Mangan, will, no doubt, be pleased to learn that it is now available in tablet form, each two tablets being equivalent in medicinal activity to one tablespoonful Pepto-Mangan, liquid. The new tablet form of the preparation is by no means intended to supplant or displace the liquid, but rather to supplement it by furnishing this standard blood tonic in a form especially convenient for travelers, teachers, business men and women, and those who find it inconvenient to carry the liquid from place to place. Pepto-Mangan, in tablet form, is marketed in bottles containing sixty tablets, the contents of each bottle being equivalent in dosage to one bottle of Pepto-Mangan, liquid. We are confident that the physician will approve of and take advantage of this old friend in a new form.

During 1916 and 1917 the dead and damaged muscle in which gas gangrene could develop was removed by operation as soon as possible. The majority of cases of gas gangrene occurred among men who had been brought to the casualty clearing stations over long distances, or who were too weak to endure operation. When gas gangrene is developing the blood pressure rises at first, and the medical officer may think that the man is recovering.

In the acute spreading gangrenes of limbs, B. Welchii was found by Bull to be the chief organism. An intense toxemia occurred only in the later stages just before death. Other forms of gas gangrene of intense toxemic type gave positive blood cultures of the *Vibrio septique*. Bull found an exotoxin produced by B. Welchii, and by injecting this obtained an antitoxic serum.

DECOMPENSATION

By E. D. Friedman, B. S., M. D., Instructor in Medicine, University and Bellevue Hospital Medical College; Adjunct Attending Physician, Bellevue Hospital, New York.

The term "decompensation" is often applied very loosely. In most cases it is used to denote failure of compensation of the right side of the heart resulting in congestion of the liver and oedema of the legs. This type of decompensation is by far the most common and is usually due to one of a number of causes.

It occurs in chronic valvular disease, particularly lesions of the mitral valve. In this disease there is first compensatory hypertrophy of the right ventricle due to the tendency towards pulmonary stasis which occurs in mitral disease. After a time, however, the right ventricle begins to fail and we then get the classical picture of right heart decompensation with or without tricuspid insufficiency.

There is a second form of right heart decompensation which is due to the failure of the so-called cor pulmonale. This type of heart is the one found in lesions of the lung or pleura which are associated with increase in connective tissue. Due to the increased resistance in the pulmonary circuit there is first hypertrophy of the right side of the heart. We all know the significance of the accentuated pulmonary second sound, the epigastric pulsation and heaving of the lower sternum in these conditions. In emphysema, chronic bronchitis, and asthma there is an active expiration with definite increase in the intrabronchial pressure. When we remember that the pressure in the pulmonary capillaries is zero, we can readily understand how the increased intrabronchial pressure would interfere with the free flow of blood from the pulmonary artery through the capillaries into the pulmonary vein. As a matter of fact we have found a low pulse pressure in these cases and believe this to be due to the insufficient filling of the left ventricle during the stage of increased intrabronchial pressure (1). We have also found that in taking systolic readings in asthma cases by the auscultatory method, there was an inspiratory disappearance of the

first sound heard. This is due to the fall in pressure which occurs when the relatively empty pulmonary veins take up the blood which was dammed back by the increased intrabronchial pressure and therefore feed less to the left auricle and ventricle. To overcome this increased resistance, the right ventricle undergoes hypertrophy. Finally there comes the stage of failing right ventricle with resulting signs of decompensation.

There is another type of right heart decompensation which occurs in cases of adherent pericardium or polyserositis. When one recalls that most of the anterior aspect of the heart is made up of the right ventricle, we can readily see the effects of adhesion between the parietal pericardium and the anterior chest wall. The heart expends a considerable part of its contractile force in useless tugging at the anterior chest wall. Besides that, tongues of connective tissue invade the musculature of the heart from the thickened pericardium and by inserting themselves between the muscle bundles impair the integrity of the right ventricle. If this process continues for any length of time the right ventricle undergoes first hypertrophy and later dilatation. The terminal stage of this disease which is usually seen in young adults is characterized by right heart failure. These patients become chronic invalids with elephantiasis-like changes in the lower extremities, and chronic accumulations of fluid (partly transudate and partly exudate) in all the serous cavities. The individuals at autopsy frequently show perihepatitis, perisplenitis and enlargement of the liver which is due partly to congestion and partly to connective tissue overgrowth (Pick cirrhosis).

There is another type of decompensation, that due to failure of the left ventricle. This type of decompensation occurs usually in cases of so-called cardio-renal disease with hypertension. So long as compensation exists these patients are comfortable, rarely have pronounced clinical symptoms and their malady is frequently only discovered during examination for life insurance. If the left ventricle begins to fail the first evidence is usually dyspnoea. This is due to the insufficient emptying of the ventricle with resulting stasis, in the lesser circulation. Objectively we find moist rales chiefly at the bases of the lungs. If this decompensation of the left ventricle occurs acutely we have pulmonary oedema or cardiac asthma. If it occurs more slowly we have

(1) E. D. Friedman and H. C. Jackson, Archives of Internal Medicine, May, 1917, Part 1, Vol. XIX, pp. 767-776.

the chronic dyspnoea described above. In the chronic cases the right ventricle also becomes hypertrophied in order to compensate for the tendency towards pulmonary stasis. We find in such cases that the pulmonic second sound too is very much accentuated. This should serve as a warning that the patient is on the verge of an acute pulmonary oedema or cardiac asthma. When this compensatory mechanism also fails we have the picture of right heart failure. This is seen in those cases of cardio-renal disease which do not succumb to apoplexy, uremia, or angina pectoris.

Finally, there is a type of decompensation which is largely vascular. This is seen in acute or sub-acute infections such as pneumonia and typhoid. It is thought to be due to failure of vaso-motor control or adrenal insufficiency. It is very much allied to shock, acute dilatation of the stomach and similar states, and is usually of serious significance. An analysis of each case of decompensation should be made with this scheme in mind in order to establish the etiologic factor and to rationalize therapeutic procedure.

On the Treatment of Pneumonia.—Dickson, in *The British Medical Journal*, in speaking of the slight progress made in the treatment of pneumonia, says that enough stress cannot be laid on the "enormous importance of rest." Cardiac weakness is so pronounced that the patient can actually die from the effort of sitting up in bed.

Following the doctrine of Professor Greenfield, Dr. Dickson considers that there are two essential parts in the treatment.

(1) Absolute rest—the value of which cannot be over-estimated.

(2) All cases are given tincture of strophantus, from the time the diagnosis is made, in sufficient doses to keep the pulse satisfactory. Early dosage is extremely important; it is absolutely wrong to wait for signs of heart failure.

The dose of strophantus varies with individual reaction to the pneumotoxin.

Strychnin the author considers as positively harmful. Heroin, 1-6 grain hypodermically, is beneficial. It quiets the cough and induces sleep.

It should be remembered that the active principle of strophantin readily undergoes decomposition when diluted in water, so it should be prescribed as the tincture alone, and not made up with water in bulk.

POST CINERES GLORIA VENIT.

(Glory Cometh After Death)

IN MEMORIAM

Alban Goldsmith, Surgeon, Danville, Ky., the "Legal Founder" of the "Louisville Medical Institute. (Charter obtained February, 1833) Now (Since 1846) The "University of Louisville."

By William Lane Lowder, B. S., "Central College," Danville. M. D., "University Louisville," Ky.

(Semi-Centennial Class). A practitioner of medicine in Kentucky a quarter of a century, 1887-1913.

Mortuis Nil Nisi Bonum.

(Say naught but good of the dead).
The Surgeon skill'd our wounds to heal,
Is more than Armies to the common weal.
—Cicero.

Dedicatory Stanzas.

Dear beauteous Death, the Jewel of the
Just,
Shining nowhere but in the Dim and
Dark;
What mysteries, doth hidden lie, beyond
thy dust,
Could finite mind o'erlook that fatal
mark!

He who hath found some fledg'd bird's
nest,
At first sight may know if the bird be
flown;
But in what fair field or shady grove may
he peaceful rest,
Or sweetly sing—that, to him now, re-
mains unknown.

Mirabile Dictu.

(Wonderful to be told)
Strange is it not? that the many millions
who,
Before thee and me pass'd the door of
darkness thro',
Not a single one came back to tell us of
the avenue,
Which, to discover, we ourselves must
travel too.

Mirabile Visu.

(Wonderful to behold)
How shall we each other know in the
sphere which keeps
The disembodied spirits of the saint'd and
immortal dead,
When all of each of us that Time could
wither sleeps
And perishes among the dust, in life, we
used to tread?

Lenvoy.

The prince who kept the world in awe,
 The judge whose dictates fix'd the law,
 The rich, the poor, the great, the small,
 Level'd are: Death counfounds them all.

Shall We Meet Again?

I have asked that dreadful question of the
 hills

That, eternal look; of the flowing streams
 and rills

That, lucid flow forever; of the stars (by
 heaven lit)

Amid whose fields of azure my raised
 spirit

Hath in glory trod; all were dumb; but
 now,

While in memory I gaze upon each living
 face and brow,

I feel the love, that, through its beauty
 kindles,

Can never wholly perish, tho' our mem-
 ory dwindles:

Beyond the Rockwaste and the blue wind-
 ing River,

Beyond the Now and Then! The Ever
 and the Never!

Biographical Sketch.

Alban Goldsmith was born at Danville, Kentucky, in the year 1788. He grew up like most of the lads of his time, with lots of native ambition and energy but with little chance for the satisfaction and display of either.

Upon Ephraim McDowell's return from Edinburgh, young Goldsmith became his friend and protegee.

Present at First Ovariectomy.

It is generally believed that Goldsmith was present (December 13th, 1809) when McDowell performed his first Ovariectomy. In the course of time Goldsmith had become sufficiently familiar with the principles of medical and surgical practice to be made a full-fledged associate by his preceptor.

Second in United States to perform Ovariectomy.

In 1823, four years after McDowell's last recorded ovariectomy, Goldsmith performed McDowell's operation, being the second man in the United States to make an ovariectomy. About 1926 Goldsmith went to Paris to study under Civale who had recently introduced lithotripsy. He returned to America after two years and performed Civale's operation for the first time in the United States.

Legal Founder University of Louisville.

In 1832 he located in Louisville, and early in the following year (1833) secu-

ed from the Legislature of the State (sitting then at Frankfort) the charter of the "Louisville Medical Institute"; which, thirteen years later (1846), became the "University of Louisville."

Thus, while Alban Goldsmith was the "legal" founder of the University, he never was in any other capacity—as officer or teacher—connected with the institution. In 1833 he accepted the Chair of Surgery in the "Medical College of Ohio" and moved to Cincinnati. He remained with the Ohio College until 1837 when the regents of the "College of Physicians and Surgeons," New York, offered him the Chair of Surgery in their institution.

Memorabilia.

(Things to be remembered)

Years may come and go, and the great scroll of Time may be rolled up and noiseless passed into Eternity, yet will the memory of Alban Goldsmith, sweet as the breath of violets by the brookside, be held in the sacred heart of Love, and live forever. He has simply gone before.

"Age can not wither, nor custom stale
 His infinite variety."

Nor can the "passing of the seasons" efface his noble deeds left behind.

There is no Night of Death, but instead
 Have the stars, one by one, beyond the
 great abyss,

Gone down on a brighter world than
 this,

and yet there is a spirit in that far-off land beyond the "Tick of Time" whose splendor and nobility, only heightened is, by his temporal life here.

Tho' long since fled, hath the visionary
 gleam,

Yet remaineth still, doth the glory and
 the dream.

Conclusion.

With physicians in general, with men of right feeling anywhere, we are not required to plead for Alban Goldsmith. In amiable admiration he lies enshrined in all our hearts, in a far nobler mausoleum than one of brass or marble; neither will his name, his deeds nor fame, pass away from the memory of medical men. While the Grosses, the Yandells and McDowell's roll on like mighty rivers through the realm of Chirurgery, bearing fleets of traffickers and assiduous pearl-fishers on their waves; this little Valclusa Fountain will also arrest our eye; for this also is of Nature's own and most cunning workmanship, and bursts from the depths of Mother Earth, with a full gushing current, into the light of the noonday sun;

and often will the dusty traveler turn aside to slake his thirst at its brink, and muse among its murmuring rocks and melancholy pines.

"He sleeps well."

Goldsmith resigned his chair in the New York school after two sessions and was succeeded by Willard Parker. He remained in New York practicing genito-urinary surgery, and died there in the year 1865. In his own line of work he had a national reputation. His classical writings on lithotomy and lithotripsy were epoch-making in their importance. Lastly, but not insignificant is the historical fact, that, Alban Goldsmith was the first man in the United States to ligate the subclavian artery.

Requiescat in Pace.

(He rests in peace)

Beside Long Island Sound (City of New York) sleep the mortal remains of Alban Goldsmith. For two and fifty years he has dreamless lain, where

Twice in four and twenty hours, at his side,

Ebbs and flows the ocean's murm'ring tide.

Where the "ocean liners" pass to and fro,
Where the robins sing and the violets blow!

Far from his "little Britain," (ancient Danville, Kentucky) far distant from his boyhood home:

The scenes in Life he lov'd so well—
In quiet now, doth he dreamless dwell!

The Windowless Palace of Rest.

The ocean may roll its inviolate waves, the warring winds may their forces join, the thunders shake the peaceful skies, and the lightnings, from cloud to cloud, swiftly pass; but not the forces of the elements combined, not the sound of thunders, nor of many seas, though they united in one terrific peal and directed to one point, can shake the security of the Tomb. Of the tumult, the dead, nothing hear; they sleep soundly: from their calamities, they rest upon beds of peace. Conducted to "Windowless Palaces," they can not be troubled by the rudest assaults, nor awakened by the loudest clamor. The unfortunate, the oppressed, the broken-hearted, with those that have languished on beds of disease, rest here together:

Their distresses long since have been forgot,
Ev'ry sorrow hush'd, and pain here dwelleth not.

Their Virtues and their Vices, now, together, slumber in the dreamless dust.

Valediction.

Alban Goldsmith, in quiet, rests:
Beyond the smiling and the weeping,
Beyond the waking and the sleeping,
Beyond the sowing and the reaping,
Beyond the rising and the setting,
Beyond the calming and the fretting,
Beyond rememb'ring and forgetting,
Beyond the Rockwaste and the winding River—

Where the angels hover and the aspens quiver.

Parting Message.

Large was his liberality, and sincere his soul,
Heav'n, a recompense, did as largely send:

To the suff'ring poor, gave he all in his control—

The *Ars Chirurgica*—from God, gain'd he a friend.

(His Virtues and His Vices)

Beyond his deeds, seek not his virtues to disclose,

Nor his vices draw from the dreamless dust, 'neath the sod,

(There they each alike in auspicious hope repose)

The bosom of his Mother Earth, his Father and his God.

Laxatives and the Physician.

When you prescribe a saline laxative you expect to remove as quickly as possible from the gastro-intestinal tract the retained products of food ingestion and other toxic substances which are harmful to the patient.

The laxative should be prompt and efficient in its action—thoroughly evacuating the colon, if possible, without griping or discomfort.

For such a laxative we recommend PLUTO WATER. It stimulates intestinal secretion and movement and with varying dosage acts as a mild aperient or a free cathartic.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

AN INTERESTING CASE OF BILHARZIOSIS.

By Maximilian Stern, M. D., New York.

This case of Bilharziosis was in a young man of twenty-eight years of age, who had just returned from Santo Domingo, where he had been swimming daily in an inland river. He noticed painless hematuria, which is a characteristic of the disease, for the first time, six months after his return to this country, and was sent to the Broad Street Hospital by Dr. E. W. Vaughan of Brooklyn. I examined him cystoscopically and found the condition illustrated herewith: Fig. I. The picture was rather characteristic of Bilharziosis and I was able to make the diagnosis immediately, having examined a similar case at the Post-Graduate Hospital for Dr. J. F. McCarthy, about a year previously. At the time of my first examination, there was no hematuria, but a few days later the bloody urine again appeared and was found to contain the ova of Bilharziosis. Fig. II.

There are three characteristic lesions present in a well advanced case of Bilharziosis:

1. Herpetic lesions nodular in appearance, with yellowish heads in small clusters.

2. Similar clusters with red open heads, probably the remains of recently erupted lesions from which the ova have escaped.

3. Papilloma like growth of varying types, some villous, and others sessile like carcinomatous masses.

All of these types were present in Dr. McCarthy's case, but in the case here illustrated, it will be observed that there are seen only the nodular clusters in addition to a cicatricial tract leading from the region of the urethral orifice, suggesting a healed area.

The interesting feature of this case, and one not mentioned in several text-books, consulted, is that after one other attack of hematuria, from a specimen of which, the ova were again found, the bladder cleared up immediately.

I again examined him after four weeks and found the bladder entirely normal; there was no trace of his former condition. During the interval between the examinations, a few irrigations of mild silver solution had been given. The fact that he cleared up so promptly led me to believe, that perhaps a mistake in diagnosis had been made, but on questioning the pathologist, Dr. M. J. Fein, and also the

urological interne, Dr. Leahy, I was assured that such was not the case, as both of these men had had much experience with the subject and one of them had been in Egypt, where he had seen many cases. Authorities on the subject state:

That the disease is incurable, and self-limiting; that after years in another climate, patients recover perfect health, in so far as the disease itself is concerned. Renal complications, due to secondary infection or ureteral obstruction from stone, or from the papillomatous growth, remain, as do also, the vesical sequellae, incident to cystitis, obstruction and calculus.

The fact that the present case is apparently well, does not yet prove that the trematodia are absent from the veins surrounding the bladder and rectum, which are their favorite habitation. It is, however, not improbable, that these cases removed from the possibility of re-infection, may recover spontaneously, even at an early date.

There appears to be at least two distinct types of the disease—the one found in South America, the West Indies and Africa, and the other in Egypt. I have been led to this opinion by learning from Dr. Leahy that the ova he saw in Egypt were uniformly much larger than those in my case.

It also has been observed by Col. Simpson, R. A. M. C., in reference to the cases which occurred in South Africa that secondary changes involving the bladder and other parts of the urinary tract were not observed. Thompson Walker states that the activity of the Egyptian type of the disease seems to require at least four years for it to run its course. Dr. McCarthy's case was one which had been infected in Egypt and although he had been in this country for several years, he still continued to have all of the vesical symptoms of the disease and the large papillomatous masses were present, despite all known means of treatment.

A point of special importance to those unaccustomed to seeing these cases, is that of the diagnosis. It is perfectly possible to confound a case in which the papillomatous growths are present with true papilloma, while the clinical symptoms in general are not identical, hematuria is the prominent symptom in both.

Painless hematuria is characteristic of Bilharziosis and though the symptom of bleeding is accompanied by pain, in true papilloma cases, it is not generally so until late in the disease. I therefore desire to call attention to the diagnostic

papular lesions of the unerupted ova and those remaining after eruption.

Illustrations.

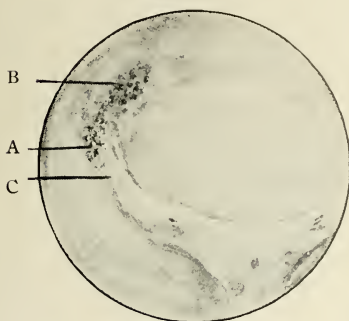


Figure I.

- a—Unerupted ova.
- b—Lesions after eruption.
- c—Healed tract.

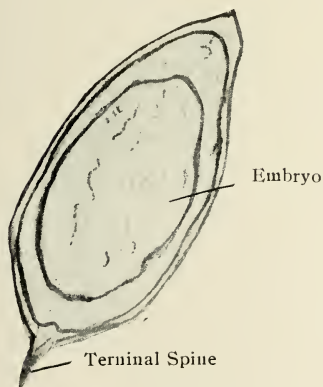


Figure II.

Typical ovum of *Shistoma Haematobium*—found in urine.

219 W. 81st.

Cancerous Linitis.—According to Carnot, linitis of the stomach is a radiographic syndrome—esophageal retention; retracted stomach, which is also rigid and indispensable and pyloric incontinence. The term linitis as a special affection of the stomach (plastic linitis) is in reality an anatomic-pathologic condition due to several conditions, one being a continuous infiltration with cancer cells. In the author's case the fatal end came from perforative peritonitis.—*La Presse Medicale*.

An Appeal for Human Embryological Material.

By William W. Graves, St. Louis.

In 1906 I observed certain malformations of the human shoulder-blade, and in contributions to current literature I have given them the collective name—"the scaphoid type of scapula," and pointed out some of its hereditary, clinical and anatomical significance.

Probably the most important observation connected with this type of scapula in man is its age incidence, that is to say, it occurs with great frequency among the young and with relative infrequency among the old. There appear to be two possible explanations of this fact:

Either:

A—one form of shoulder-blade changes into the other during development and growth.

or

B—many of the possessors of the scaphoid type of scapula are the poorly adaptable, the peculiarly vulnerable, the unduly disease susceptible—the inherent weakened of the race.

I have attempted to answer these questions by seeking evidence in various directions and one of the most important of these has been a study of intrauterine development of shoulder-blades. My investigations in this direction have been limited by the material at my disposal, which has been inadequate for a definite solution of this phase of the problem. I am, therefore, appealing to physicians for fetuses in any and all stages of human development.

It is desired that the material, as soon as possible after delivery, be immersed in 10 per cent formalin in a sealed container, and be forwarded to my address; charges collect. Due acknowledgment will be made to those forwarding material.

727 Metropolitan Bldg.

Primary Sarcoma of Prostate.—Nicholson and Hainworth (*British Medical Journal*) describe a case of primary sarcoma of the prostate in a boy three and one-half years of age. He had had difficulty and pain on urination for seven weeks and it was necessary to cauterize him on frequent occasions. At operation it was found that the prostatic urethra was occupied by a tumor the size of a golf ball. The tumor was shelled out easily. It proved to be sarcoma. There was recurrence, however, with a fatal outcome.

The Use of "Antigens" in Diagnosis by the Wassermann Reaction: The Necessity for Further Investigation.—Browning and Kenneway (*The London Lancet*) say that they approve the value of adopting a standard antigen in making the Wassermann reaction, the authors point out the limitations of those in common use, which should preclude their adoption as "standard."

The property of a syphilitic antigen is that when mixed with syphilitic serum (heated to 56 deg. C) in suitable proportion and added to fresh guinea-pig serum, it deprives the serum of its hemolytic power.

Attention is called to the evolution of knowledge as to the syphilitic antigen. It is desirable that the quantitative difference between a negative and a positive serum should be as great as possible, as measured by the excess of the amount of complement which the serum-antigen will inactivate, because this is the only index of positiveness which exists. Examination shows that alcoholic heart extracts possess this quality to an outstanding degree, therefore human heart extract has been employed as syphilitic antigen for routine purposes. Other workers have used a similar extract with the addition of cholesterol. Some laboratory workers found that the heart "lipoids" plus cholesterol and certain normal sera led to a great inactivation of complement. They continued to use liver-lecithin, feeling that the smaller complement fixation was compensated by the fact that in a series used with a parallel series plus cholesterol, if a given serum caused more complement inactivation, it was an indication of its syphilitic character.

The crude heart extracts have a tendency to cause considerable complement fixation with non-syphilitic sera. On the other hand, such an antigen as that first advocated by McIntosh and Fildes has found much favor. Its popularity is evidenced by the fact that of the four methods of performing the test recommended by the Special Committee from the Medical Research Committee, three employ this antigen. The Committee states: "Of the various extracts which have been recommended at one time or another, that prepared from heart and reinforced with cholesterol, as recommended by McIntosh and Fildes, will be found simple to prepare and as satisfactory as any in use at the present moment."

Walker and Swift from results of tests believe that the antigenic property of

cholesterol-heart extracts is especially evident when testing sera from recently treated cases of syphilis.

The authors have carried out a series of parallel tests employing liver-lecithin plus cholesterol, and McIntosh and Fildes' heart extract plus cholesterol. The results confirm their earlier observation that liver-lecithin plus cholesterol antigen with many positive sera gives a smaller amount of complement fixation than other antigens; the liver-lecithin-cholesterol antigen leads to greater complement fixation than does the heart-cholesterol antigen.

Not only may one antigen differ from another as regards optimum concentration, but the amount of serum necessary to elicit maximum complement fixation may vary.

Results have led to adoption of the following routine in Wassermann tests: For each serum, two series of three tubes are set up: (a) containing liver-lecithin-cholesterol (1:8 turbid emulsion) 0.3 cc. plus 0.025 cc. patient's heated serum; and (b) heart extract plus cholesterol (1:30 rapidly mixed emulsion) 0.5 cc. plus 0.05 cc. patient's heated serum along with increasing amounts of complement in each series.

Clearing up the present uncertainty is urged by concentration on study of (1) cases of syphilis with previous positive reaction and present reaction nearly extinguished; (2) untreated cases from congenital syphilitic families; and (3) cases where suspicious or positive reactions have been obtained.

For certainty in diagnosis it is advisable always to use both antigens. If only one is used, all sera should be preserved by freezing that the test may be repeated with the other antigen.

The Pandemic in Macedonia in the Spring of 1918.—That other territories were attacked as early as Spain appears to be shown by an account of the disease in the French Macedonian army in May-June of that year. This outbreak was at first confused with pappataci fever, but was soon identified with influenza when pulmonary complications set in. It is now fairly certain that the same affection appeared in Spain, Italy, and Macedonia at about the same time, but that for some unknown reason Spain became the chief distributing point.—Office International d'Hygiene Publique.

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INTENTIONAL PROCREATION.

In the discussion of a paper read by McCready (1) before the section on Diseases of Children, at the present session of the American Medical Association, instances of children in the same family with widely varying characteristics, were cited as being the result of "accidental," rather than intentional procreation.

The mental and physical state of the parents at the time of inception unquestionably has a definite bearing on the inherent attributes of the child. It has been shown (2) that there was one individual out of every four hundred and five in the United States who is sufficiently insane to require custodial care. That makes the problem of prevention of psychasthenic and neurasthenic disorders a very important one.

That the human cortex reaches its full thickness by the age of fifteen months and that all nerve cell multiplication and migration is completed at this time seems to have been definitely proven by Donaldson (3) and Sugita (4). Unquestionably then, the basis for organic and functional nervous disorders—the infections alone being excluded—must necessarily be acquired either in the prenatal period or at a very early age.

McCready (1) pleads for a more careful consideration of the nervous child, and suggests more careful attention to his education—but suggests the possibilities of "over-attention." Probably the real keynote to the situation was struck by Dr. Harold B. Wood in a discussion of this paper when he suggests that mentally par children are more apt to result if the time for procreation is intentionally selected to coincide with mental and physical conditioning of the parents—more particularly the father. Curiously, in the cases he presented, that of the mother did not seem to be a factor. That should be considered, however, in the light of our present meager knowledge. This same theory is borne out by the results of animal breeding, where all importance is placed in the selection of the sire; practically no attention being paid to the animal that is to be impregnated.

A further step in Eugenics is necessary:

The prenatal instruction of expectant fathers.

- (1) McCready, Jour. A. M. A. LXXIII-15.
- (2) Annual Census of Insane, etc., in Institutions in the United States. Mental Hygiene III-78.
- (3) Donaldson—Harvey lectures 1916-17, p. 113.
- (4) Sugita. Jour Comp. Neurol. 1917-581 ibid 1918, p. 177.

QUARANTINE.

The present practice and manner of quarantining a person sick with an infectious disease, like scarlet fever for instance, is probably the most unscientific procedure that has ever been advocated and projected by the medical profession, for the control of disease. But it must at once be admitted, however, that in the present state of medical knowledge and achievement, quarantine of such contagious diseases, with all of quarantine's absurdities and futility, must be looked upon as a necessary make-shift. The question arises, if such is the case, then why discuss quarantine? The answer to the question, is in the first words of the first line above: "The present practice and manner of quarantining." It does not follow that quarantine, even when sanctioned by medicine and backed by law, is a thing so sacred that it can not be discussed.

Policing the contagion of physical disease, is very much the same as is the policing of the various immoral contagions. The first contact of the law of quarantine with physical disease contagion, is the presence of the nurse, who tacks up the sign. The first contact of the restraining law against the contagion of immoralities, is the presence of the policeman. With this inference, that usually the physician has first notified the health office of the disease, before the nurse appears; while the policeman himself makes his own diagnosis. In the one case, the interpreter of the law of quarantine, is the nurse who knows nothing about medicine; and in the other case, the interpreter of quarantine law against immorality, is very likely one who couldn't read the statutes.

To many people, the right to wear an official badge carries with it, not only a sense of great responsibility, but also the sense of an ability equal to the occasion. This feeling is not either confined to the quarantine nurse, and to the policeman. The nurse who supervises quarantine, is

an officer of the law. She feels that she is the law, and naturally, the less she knows about disease, the surer she is that she knows it all. And it comes about, that the nurse's assumed self-importance shapes the course of the health office, and dominates the health commissioner himself.

This ruling power of the nurse policeman, is the same as is the rule of the clerk at the "Information" counter, in all business establishments. The very life of the business institution, is dependent upon the defense and support of the information clerk, by those highest in authority in the concern. And one desiring to do business with the firm, could do no more foolish thing, than to try to go over the head of that clerk. All of which business machinery is as it should be. But the success of the business institution can only be worked out, by seeing to it, by those in authority, that the clerk is given sensible rules to follow.

In the matter of giving rules for the guidance of the nurse who polices contagious diseases, the health officer is grossly at fault. The rules as handed out to these nurses, at least allow them to feel that they have charge of everything connected with the case, even to its diagnosis and treatment. The attention to the treatment of the disease by the nurse, was alluded to in the published statement of a newly appointed health officer that, "The nurses under him had been instructed in no way interfere with the physician's treatment of the case." One needn't be told what had been going on, under the preceding administration!

As the boards of health are usually made up of non-medical men, the officer whom they appoint, presumably is obliged to follow the board's dictation, which in a sense lessens the health officer's responsibility. The board too, interprets the law. The law itself was passed by non-medical men. Which accords with our democratic form of government. So that our democracy is alone to blame, when the police nurse is given orders, "to watch the case and if anything suspicious shows up, to report to the health officer." She is told to do this. She isn't to blame. After she has made her report of a mistake in diagnosis, the epidemiologist of the health board, without notice to the physician, examines the patient, and feeling the necessity of defending the nurse, is very likely to concur with the "suspicion." After the visit of the epidemiologist, the patient is legally sick. In her own esti-

mation the policeman nurse is a very reliable diagnostician. And no one else knows so much about medicine in general, as does the clerk, "who has been in the health office for years." All of which would not be so bad—that is to say quarantine would be worth all it costs, if quarantine measures really prevented disease. "Stamping out disease," is the newspaper idea of the functionings of quarantine. At the best, quarantine merely holds over non-immunes for the next epidemic. But any one would rather be only liable to infection, than to be actually down with disease. So quarantine is a necessary health measure. The plea here, is for a sensible quarantine. For a quarantine that recognizes the attainments demanded by high standards of medical education; for a quarantine that is not in the least degree policed by incompetents; that puts the attending physician at least on a professional level, with the medical men of the health office; and for a quarantine that even goes so far as to make the attending physician alone responsible to the community, for all that grows out of his management of the case.

THE PLACE OF ORIGIN, DEVELOPMENT AND VITALIZATION OF EPIDEMICITY.

In the Journal for June the statement was made that, "After about six weeks of havoc producing work, the germ of influenza apparently goes back again to its undiscoverable place of hiding." Seemingly, the germ grows and fits itself for a specific work, goes out and exhausts its power in accomplishing its purpose, and then returns to recuperate. For centuries scientific men have been searching for the place where the scourge mobilizes its force. And unsuccessfully.

One of the very oldest theories regarding the origin of the world infecting influenza is that in some infection inviting country, like Far Russia for instance, an entire people is destroyed. The uncared for dead bodies finally become air-borne dust, and afterwards the currents of air that gathered up the dust, from time to time contact different parts of the earth's surface. The theory would account for some of the outbursts of the disease. But unfortunately the place where the bodies become dust, has not been located.

Fifty years ago, Edmund A. Parkes (1) discussing these features of influenza, in very free quotation, said: "Influenza is said to have overspread all Europe from

Russia in the space of six weeks. Sometimes it has traveled through the tropics, and again through the icy regions of the north. The exact spot on the earth's surface where an epidemic commences has not been made out. One opinion is that all epidemics own one single unknown source. The other is that it may arise anywhere, and that there may be no connection between different epidemics prevailing at the same time. Fogs and mists, ozone, fungi in the atmosphere, the flight of locusts, measles, scarlet fever, diphtheria, pneumonia, bronchitis, and diseases of brutes have been looked upon at different times, as having been the forerunners of epidemics of influenza."

In bringing the matter of knowledge regarding the originating and developing place of epidemicity up to date, the *Journal of the A. M. A.* for September 27th, 1919, gives first place to the discussion of the subject by Dr. Simon Flexner. (2). Than Flexner, there is none greater. With the same free quotation as above, he says: "Influenza has endemic homes. In these homes it remains over long periods. For reasons not clear, the dormant foci take on unwonted activity. The micro-organism responsible for influenza is still in dispute. There are excellent reasons for believing that the endemic home of influenza is in the border between Russia and Turkestan. From this eastern home every two or three decades a migrating epidemic moves eastward and westward. There are wide divergences of belief and opinion regarding the nature of the inciting micro-organism, and the manner of its infection. In uncanny way influenza strikes down its victim. Hence the invoking of mysterious and superstitious influences to account for phenomena. We have only but recently emerged from a superstitious past. Epidemics simply follow the course of all infectious diseases. From some unnoticed or forgotten exposure a single case develops, and then after a few weeks comes the "explosive" community attack. The speed of travel of the disease, varies between that of the camel in Russo-Turkestan, and the flight of the airship. The eradication of endemic foci is a great world program. It is not improbable that some time it may be undertaken."

Singularly enough tradition, history, and present day investigation all persist locating the starting place of the disease some place in unknown and unknowable Russia. Everything would seem to indicate that the solution of this problem pre-

sented by influenza, means the expenditures of money and time of a long long quest.

(1) *Reynold's System of Medicine*, Henry C. Lea, Philadelphia, 1879.

(2) *Epidemiology and Recent Epidemics*. Simon Flexner, M. D., New York.

THE MILAGE OF THIRTY-FIVE YEARS OF MEDICAL PROGRESS.

An advancement in medicine, always means the overthrowing and passing of some pre-existing theory. A medical theory is usually studied with the intention of accepting all that the theory implies; and thus does the theory become part of a medical education. So it comes about that when a theory has broken down before a proven fact, it means that the medical mind has had to give up ideas which were almost attributes of the mind itself. It means that the mind has been disabused of erroneous ideas; and there are lots of minds that give up theories only when they are actually compelled to do so.

In looking back at the problems which were in the process of solution thirty-five years ago, one very soon becomes so greatly interested in the way that the minds of great men were defending time honored theories, that one comes near losing sight of the scientific fact, which is about to supplant the equally scientific theory.

Koch's tubercle bacillus did not in one night capture all of the great minds of that time. Through very many object lessons, Nature had for a long time been trying to show the bacillus to men, and after it had once been seen, Nature persisted in keeping it in sight of men. Such a fact has in it an element that is sure to sometimes overthrow theory. And in 1884 in a discussion before the American Medical Association, Koch's tubercle bacillus' theory was accepted in its entirety by, Flint, Welch, Fitz, Tyson, Jane-way, Shakespeare and Earnst; but somewhat doubted and disputed as to the contagiousness of tuberculosis, and as to the specificity of the bacillus by Miller, For-

mad, Sternberg, Belfield, Smyth, Green. Scrofula may be said to have passed out of the list of diseases at that time, and chronic pneumonia, and phthisis as being distinct from tuberculosis, as passing; though Wednt quoting Biedert and Sigel still considered them to be individual diseases.

Samuel D. Gross, M. D., died Tuesday, May 6th, 1884, the acknowledged greatest and most famous surgeon of the world.

No other medical matter in 1884 caused such radical expression of opinion as did the nature, prevention, causation, and treatment of puerperal fever. The germ theory of disease, and all that went with the theory had caused a revolution in medicine. There was warfare everywhere. And no place was the battle more fierce than it was between those who held that puerperal fever was something other than a septicemia, and those who held that it was never anything else than a septicemia. Then, there were the skirmishers and detail men of wavering views, who brought up ammunition where it could be used, to the opposing first lines of battle. There were good generals on both sides. But here again, destiny was unchangeably on the side of septicemia, and was going to win out. The surgeon Tarnier of France did not believe in the "essentialism" of puerperal fever, and Sizedey did not believe the germ of the disease originated in the woman. And there they were!

Lusk summarized the most advanced thought as to the etiology of the disease in the statement that "puerperal fever is due to the septic inoculation of wounds made by the separation of the decidua and the passage of the child through the canal." Then started the battle over prophylaxis. Antiseptic vaginal douches both before and after confinement, was one procedure; and absolute non-interference before delivery, and the application of compresses of oakum squeezed out of carbolized water after delivery, was the other. So far did the fight carry that Seth Hill said, "The gentler sex should be advised to wear a carbolized pad over the vulva from the inception of catamenia until the menopause." The discussions of the New York Academy of Medicine have never been more interesting, than when those who represented the coming and the going of medical knowledge gathered respectively around the leadership of T.

Gaillard Thomas on the one side, and around Fordyce Barker on the other.

The Code of Ethics of the American Medical Association may be said in 1884 to have passed from what it had been, to what it now is.

Specialism was attracting much attention because new limitations of practice were being announced, and because more physicians were fitting themselves for the more commonly recognized specialties. Criticism adverse to specialism was, that the specialist was so in name and not in merit, and that it gave the specialist a chance to work in advertising, which the general practitioner could not honorably compete with. The passing Code of Ethics, was much quoted, in this connection.

The physician's slate with slate pencil attached was then either on the waiting room table or else hung up on the office door; both slate and pencil were mute representatives of all that went with the saliva of the doctor, and of his patronage.

The Davidson syringe was in general use, but the fountain syringe was, without the waging of much word-war, silently but surely winning out in popular favor.

A no less noted physician than J. Lewis Smith calmly reported before the New York Pathological Society, the history of a case of appendicitis that had been allowed to go on to perforation with death of the patient, as a most baffling remedy. The president of the society was reminded of a case of "perityphilitic abscess" which had ruptured into the rectum, with recovery of the patient. Janeway thought it possible that the "usual surgical operation" might have saved the patient of Dr. Smith if the diagnosis had been made in time.

Wm. T. Bull reported 20 cases of rectal etherization by forcing the vapor of ether boiling in water into the rectum. He saw no good in it.

In going over the literature of the time one finds many articles upon the diseases of unknown origin, that read exactly as do present day articles upon influenza, for instance. Welch, writing back there said, "Many Medicines, but Few Remedies." Without doubt the same statement could be made with absolute truthfulness today. Looked at now, the milage in thirty-five years has been great, but medicine was as sure of its foundations then, as is medicine today confident that the solutions of great problems are being worked out.

THE UNIFICATION OF ALL PUBLIC HEALTH AND MEDICAL ACTIVITIES DEMANDED.

The experiences of the world during the past half dozen years has materially altered the view-point of many people as regards numerous things. Formerly there was in the minds of many physicians and laymen serious objection to the national supervision of disease prevention problems as associated with the inter-relations of different states; and many a "statesman of the old school" looked askance at the thought of the strong hand of the federal government "interfering," as it was oft-times termed, in such matters. If any of this sentiment still remained, America's war with the Central Powers has unquestionably in greatest measure eliminated it; the one big first thought being now, how best to secure most efficient service along every line of activity. The recent meeting of a joint committee in Washington, D. C., composed of representatives from the various State Boards of Health, the Public Health Service, and the American Medical Association, where careful consideration was given to the many-sided questions involved, should give added impetus to the oft-made suggestion of a cabinet health officer. This idea, now a score of years or more old, will not down, but like Banquo's ghost, continually comes to the front, and will doubtless be, from time to time, in evidence until the statute creating a Department of Public Health with its chief official a member of the President's official family, is enacted and placed in operation.

At present, the war experience has emphasized the imperative necessity of getting together the various and sundry departments, divisions, subdivisions, sections, etc., stored away in various portions of the different parts of the great Federal government at Washington, D. C. (some of them vitalizing actively, some barely existent, others wholly dormant, still others devoid of life manifestations) and making one of the greatest and most helpful offices yet created—a Department of Public Health with its Secretary and he ranking as Cabinet Officer. Only when this is attained is it possible to develop the various lines of activity which the advanced state of modern medicine and its affiliated sciences now make possible, to the extent the necessities and the opportunities afforded in promoting the public health.

DR. BENJ. K. HAYS GOES WITH THE NATIONAL TUBERCULOSIS ASSOCIATION AS ONE OF ITS IMPORTANT WORKERS.

Dr. Benj. K. Hays, Oxford, N. C., a well known physician and formerly Secretary of the North Carolina State Board of Medical Examiners, and for the past four years Secretary of the North Carolina State Medical Society has accepted service with the National Association for the prevention of Tuberculosis to engage in field work designed to instruct the discharged soldiers now in civil life outside of institutions, how best to conduct their fight against the disease. Early in 1918 Dr. Hays entered the Medical Corps of the Army, and has not only received the special instruction afforded the army tuberculosis experts, but in addition for several months he has seen service in the great U. S. Army Tuberculosis Hospital at Oteen, near Asheville, N. C., serving with the rank of Captain. Dr. Hays will make a success of this work, and the National Tuberculosis Association is to be congratulated on securing him for this important work.

SIMILARITY OF THE PROTOZOAN INFECTIONS.

On the surface, there appears to be very little similarity between syphilis and malaria, but recent investigations show that they resemble each other to a greater degree than has been ordinarily supposed.

Carles (1) suggests that malaria, syphilis and amoebiasis belong to the same class of diseases essentially chronic and difficult of cure and Jeanselme (2) believes that the first two are seldom if ever cured and that only through entire change of environment and very prolonged treatment can permanent results be expected. E. de Massay (3) shows the similarity between malarial and syphilitic meningism and Whitmore (4) proves another similarity of the diseases in finding the malaria plasmodium in the spleens of patients dying with some other disease in which schizogony had taken place but not in sufficient quantities to produce symptoms of the disease.

Now, Dr. Marguerite White reports several cases in the Lancet (5) which were unusual in that they were operated on for apparently surgical diseases which later proved to be malarial. She says quite positively that the negative history of malaria and the absence of parasites in the blood cannot be accepted as proof of

the absence of the disease, which is similar to our present day opinion of the Wassermann test—a positive test meaning syphilis; a negative test meaning nothing. And she sums up her case as follows: "sub tertian malaria may simulate almost any disease, surgical, mental or medical."

Can these evidences be taken of further proof of Sir William Osler's statement: "Know syphilis in all its manifestations and all things clinical will be added unto you?"

- (1) Jour. d' Med de Bordeaux 89 No. 1.
- (2) Bull de l'Academie de Med. lxxviii No. 10.
- (3) Bul. de l'Soc Med des Hospitaux Paris xli No. 33.
- (4) Johns Hopkins Bulletin xxix 325.
- (5) Lancet July 26, 1919.

PHARMACO - PSYCHOLOGIC TEACHING BECOMES UNITED STATES LAW.

Not long ago in a Federal Court (1) an attorney was trying to prove by a witness on the stand, that said witness, at a specified time was not under the influence of alcoholics. The attorney was doing this because in some way it had been proven, and the fact was admitted by the witness, that just previous to the time mentioned, the witness had been drinking. The naturally suggested possibility of a prevailing state of the witness's mind of only partial accountability at that time was compromising matters, and so was working to the disadvantage of the attorney's case; and as attorneys are wont to do, the attorney was trying to laugh the intoxication idea out of court by showing the absurdity of the insinuation, by the testimony of the witness himself. And as is usual in such cases, the witness was prepared to go his full length, in his efforts to convince the court of his sobriety.

The reader will understand of course, that the legal features of the case are here stated in only an imperfect and very crude way, as it is practically impossible to translate the substance of legal phraseology, into the common-place English words of medicine, indeed it is more than likely that the real legal features of the case, are not brought forward at all. But, however, out of what the attorney was doing and trying to do with the witness, there came about a court ruling that highly complimented scientific medicine. The ruling made the teachings of pharmaco-

psychology, the law of the United States Courts.

The law is that, "When a man has been drinking he is not competent to testify as to whether he is or is not under the influence of alcohol."

For a long time pharmacology had been pointing to that psychologic fact as having been scientifically demonstrated. Very many other judges had in their courts listened to this kind of testimony, and had had the opportunity to incorporate pharmacologic science into legal structure, but they had failed to see the point. There were many things blinding them.

Unlike the course of procedures in State Courts, it is the common sense time saving practice in United States Courts for the Judge, at the proper time, to take matters into his own hands—that is medically speaking—and to cut out buncombe that in some other courts is often looked upon as evidence of great legal ability. In this case the ruling only affected the narcosis of alcohol. The law has come to stay, as it will doubtless be a long time before a higher court will care to dispute the physiologic principles which the law recognizes. But narcosis, in all of its bearings, is a big matter in the affairs of men.

Just now, the other narcoses are sitting in judgment on the narcosis of alcohol. It has taken the centuries long dreary march, and a march peopled with many disasters, to bring public opinion up to where it will sustain this law of the Federal Court. Every student of sociology, can see in the moves that man has made in the game of civilization in the past, the moves he will make in the game of civilization in the times that are ahead. And the sociologic student will not be able to get over-much comfort out of what he sees for man in the future. There are many kinds of narcosis, and some of the narcoses are not from the taking of drugs. Medicine knows that the real cause for the prevalence of any narcotic habit, is the narcotized public opinion that sanctions the drug using. Medicine knows that a general narcosis of the citizens of a country, is but symptomatic of the opinion of the citizenship. Medicine, when doing its best and most useful work for mankind, is seeking to prevent disease. Apparently it is a long way around in the treatment of disease, to begin at the very bottom, and to go about the making of a healthy public opinion. But it was the teaching of pharmaco-psychology by

medicine, that is entitled to the credit for the enactment of the scientifically based court law, by the educated Judge.

(1) Judge John M. Killitts, Federal Court Northern Dist. of Ohio.

PARENTOLOGY.

Just now, in many parts of the country, there is being undertaken the education of young people along lines that are believed will lead towards a more rational selection of life's partners. The movement is a sociologic one. Indeed, such education is a sociologic necessity, as the principles which are involved, are the subject-matters and facts underlying and foundationing sociology itself. The other features of a sociologic Utopia can be built upon this primary step, after the step has been taken, but eventually there will be nothing upon which to build a sociology, if the importance of careful study of the beginnings of home life are disregarded. The study of home life, is parentology.

Very briefly stated, the educational plan is to give young people, as one part of their school curriculum, the care of children. All education begins with the primer. To the boy and girl it seems a long way from the primer to the college graduating exercises. Just so here, does it seem a long way from this kind of teaching, to an intelligently founded and governed home. But as is the case in all educational attempts, this is a tracing of phenomena back to the mental, or other invisible forces that are responsible for the phenomena. In the giving of the care of children to young people, the thought is, that the young people will have impressed upon their minds the fact that the conduct of the children, as they meet them, is but representative of the mental and moral qualities of the children's parents. Through very instinct, the thought is that these young people will get to love that which has produced the good conduct, and just as instinctively will they get to hate the evil influences which are responsible for the bad conduct that, in their care of the children, continually torments them. All of which looks like good logic.

As a matter of course, the object of this education is not so bluntly put to the young people, as is here stated. And too, it is easy to see that the educational plan does not so well fit into the life of the boy, as it does into the life of the girl. But philanthropic and humanitarian

workers, however, are trying to make the sociologic clinical material of needy and neglected children, adaptable to the moral uplift of both girls and boys. This seems to be going to the root of home life; and whatever of such education does finally pass over into future homes, will be just so much of sociologic gain.

In a special way, medical men have attention to the moral and intellectual qualities of home life forced upon them. And to no other class of men does the grandiloquent phraseology: "A man's home is his castle," show up as a subterfuge for the hiding of moral degeneracy conduct, as it shows up to the physician in his intimacies of home life. At other times in these columns the biologic fact has been referred to, that the best things in life—the things that make for the evolutionary uplift of mankind—are passed onwards and upwards through the female, rather than through the male. Evolution has decreed that the female shall bear the brunt of life.

Every physician knows that the average boy and young man need education in parentology, a hundred times more than does the average girl and average young woman. No physician needs to be told what the effect upon national life would be, if the average young woman were on the same sexual moral level, as is the sexual moral level of the average young man!

Biology or evolution or whatever name one may elect to give to the forces has put upon woman the burden of having to counteract, or to make over the moral looseness of man, into a home life that will be at least respectable. By her superior strength of character, and often at the expense of her own great mental and body sacrifice, she so controls the man as to build a protecting wall between the man, and defenseless womanhood. To try to make clean the minds of boys and young men, and thus relieve womanhood of the burden, is one of the goals striven for by philanthropists, in this educational program. Such education, is fundamental parentology.

One of the features of a sociologic Utopia, would be the bringing together in family ties of every two persons who are physically and mentally fit. The making of such mental fitness, is the aim of the educational scheme. One may go so far as to say that it is a sociologic handicap and liability, when society fails in properly mating its best building material.

Perpetuation of the life of the state is predicated upon such mating.

The education is prophylactic against sociologic blight. Prophylactic against Spinsterhood and Bachelorhood; against physical degeneracy; against immorality; and seeks to head off all of the evil things that come as the result of bad training of the children in the home. The physician sees parents whose own lack of education along those lines, make them absolutely unfit to govern children. Such parents are the surest that they know it all. This study of parentology, will help to foundation a better order.

DR. W. S. RANKIN, PRESIDENT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The election of Dr. Watson S. Rankin, Secretary of the North Carolina State Board of Health at the forty-seventh annual meeting of the American Public Health Association in New Orleans last month, as its president for the ensuing year, is a deserved compliment to one of the nation's most distinguished sanitarians, and is most keenly appreciated by his many Carolina friends within and without the profession who are duly mindful of his fine character, his sterling virtues, his great capacity for work and his intelligent grasp of every sanitary problem that comes within the limits of his activities as state health officer. His work in the A. P. H. Association, like his work in the A. M. Association, his work at Wake Forest College before he entered public health work, his vast accomplishments as Secretary of North Carolina State Board of Health, his labors in every plane of endeavor has ever marked him as a man of great capacity for construction, and in the prime of vigorous young manhood, Dr. Rankin is but fully entering on a great career as a nation-wide known authority on hygiene and the sanitary sciences.

TRINITY COLLEGE PHYSICIAN.

Dr. J. A. Speed, an alumnus of the school, has been appointed physician to Trinity College, Durham, N. C., and in addition to caring for the sick, he will attend the college each day with a view to exercising a careful professional supervision over the college students and faculty, but in addition will make careful physical records of each student with a view to having all possible data in hand at all times relative to every one admitted to the institution.

EDITORIAL NEWS ITEMS

The Crowell Urological Clinic of Charlotte, N. C., has added to its staff Drs. L. C. Todd and Hamilton W. McKay.

Dr. J. R. Vann announces that he will engage in the general practice of medicine in Fayetteville, N. C.

Dr. Mark Alexander of Morganton, N. C., was married Wednesday, October 8, 1919, to Miss Neppie Clary Brothers of Raleigh, N. C.

Dr. E. Reid Russell, formerly of Charlotte, but for some years past a leading oculist of Asheville, N. C., has returned home after a few weeks spent in Eastern clinics.

Dr. S. Westray Battle, Asheville, N. C., brilliantly entertained the entire membership of the Buncombe County Medical Society at his handsome home on Victoria Road on the evening of October 20.

The Winston-Salem Hospital has selected Dr. John E. Daugherty formerly superintendent of a large hospital in Brooklyn, N. Y., to be superintendent of the city hospital.

Dr. Daugherty is a native of Akron, Ohio, and organized base hospital unit No. 97 at Camp Travis, Texas, commanding it during its service overseas.

The Interdepartmental Hygienic Board has effected an arrangement with the N. C. State Board of Health whereby the latter will have some supervision over the activities of the four expert detectives and prosecuting attorney the former will at once place in active field work in this state as a part of the anti-service crusade now being pressed with increased vigor.

The Lawrence Hospital of Winston-Salem, N. C., according to newspaper reports, was opened September 1st with a capacity of 20 beds.

The hospital will have a staff of two surgeons a business manager and five nurses. We understand that the operating room will be complete with an X-ray apparatus attached to it. Dr. G. C. Cooke of Winston-Salem will be resident physician and will have his office in the building.

At the recently held session of the American College of Surgeons in New York City, the following well known North Carolina surgeons were admitted to fellowship: Drs. D. T. Tayloe, Washington, N. C.; R. N. Duffy, New Bern; T. M. Green, Wilmington; Parran Jarboe, Greensboro; Henry F. Long, Statesville; E. A. Lockett, Winston-Salem. A most admirable selection of capable and honest surgeons alike, creditable to the College, to the state, and to the profession.

Dr. Kemp Neal, Monroe, N. C., Locates in Raleigh.—Dr. Kemp Neal, son of Dr. J. W. Neal, Monroe, N. C., has returned from overseas service with the A. E. F. and located in Raleigh, N. C., with offices in the Tucker building. Dr. Neal is easily one of Carolinas best prepared young medical men. Descended from a line of high-grade physicians his quiet, gentlemanly father being a medical man of much culture no opportunity has been spared to render his fitting complete. A graduate of Trinity College, class of 1913, he received his medical degree from Harvard in 1917, and immediately entered the U. S. Army medical service, serving with Evacuation Hospital No. 10 in the Argonne Forest, and later on the staff of Base Hospital No. 55 at Toul.

Dr. J. Julian Chisholm lately returned from overseas service in the U. S. Army, announces the opening of an office at 1109 St. Paul St., Baltimore, Md., for the care of Ear, Nose and Throat affections. To the older members of the profession the name calls to mind the talented oculist of a generation past who achieved world-wide fame as the first teacher of the ocular specialty in America. The younger doctor of the same name is his nephew, a gentleman of the finest educational and professional opportunities, and those who best know him predict for him a career in the profession worthy of the Chisholm name which has been worthily linked with South Carolina medicine for the past few generations.

Doctor Reuben A. McBrayer, of the State Sanatorium for Tuberculosis, and son of Doctor L. B. McBrayer, will be married to Miss Louise H. Ludlow, daughter of Colonel J. L. Ludlow, of Winston-Salem, N. C., on November 7th, 1919. This will be a quiet church wedding at the Reynolds Presbyterian Church. Doctor Reuben is a graduate of Wake Forest College and in medicine

from the University of Pennsylvania, 1916. He spent three years in the army and of that time one and a half years in France where he was with the 30th Division until the armistice. He has been at the State Sanatorium as Pathologist since his discharge in June, 1919, and will remain there indefinitely in this work.

Miss Ludlow is a graduate of Agnes Scott college and the youngest daughter of Colonel Ludlow.

Dr. Edward Jenner Wood, Wilmington, N. C., has recently sailed for England where he will spend some time in study preparatory to receiving the degree in Tropical Medicine at Cambridge. In addition he purposes to do some extended work on functional neuroses in Guy's Hospital under Col. Arthur Hurst and also expects to take heart pathology under Lewis. Dr. Wood will be abroad some time adding to his already voluminous professional knowledge. His many Carolina friends and admirers within, as well as without, the profession, wish him **bon voyage** and a safe return.

The American Red Cross has agreed to co-operate with the State Board of Health in creating a Bureau of Infant and Maternal Hygiene and Public Health Nursing to be maintained by both bodies jointly. This will be a substantial enlargement of the department of Infant Hygiene so admirably conducted for some months past by Mrs. Kate Brew Vaughan, recently resigned to accept similar service in California. The personnel of the new bureau will consist of a State Director of Nursing, and two assistant supervising nurses with a stenographer and assistant stenographer, and great things will be expected of the new bureau in the way of both helpful advice and substantial assistance to the solution of infant and maternal questions in the state.

Dr. J. W. Tankersley, Wilmington, N. C., who has successfully conducted a surgical Hospital in that city for a few years past will remove to Greensboro, N. C., where he will also continue the practice of surgery with ample hospital facilities.

Dr. B. E. Washburn, of the Rockefeller Foundation Medical Service who for three years past has had charge of Rural Sanitation in North Carolina will leave the state January 1, 1920, to take up a three years' programme along similar lines in Jamaica under the direction of the

Rockefeller Foundation. To say that Dr. Washburn's work in North Carolina has proven highly satisfactory is but putting it mildly. One of the most zealous and capable health workers ever in the service in this state, his efforts have made a permanent impress on the public health activities, and the state or nation securing him is fortunate between one-third and one-half of the citizenship of the state are now under whole-time county health officers; fifteen co-operating with the state board of health and eight additional counties whose local treasures bear their whole expense.

Dr. Charles Fremont Taylor, editor and publisher of the Medical World and widely known in the profession, died at his home in Philadelphia November 3rd. He was a practical and a very useful writer. He published "Equity," a quarterly magazine and wrote extensively on political, sociological and economic questions. He was editor, manager and publisher of the Medical World since 1883. Possibly his journal was read by more physicians than any other in America. He had a peculiar and interesting style in attracting the general practitioner. He was a man of great executive ability and was for many years a member of the Executive Committee of the A. M. E. A. and in this way the writer was thrown with him a great deal. He was president of the A. M. E. A. in 1908 and during his period of office he discharged his duties in a dignified and useful way. The writer of this notice of Dr. Taylor's death has his portrait in his private office in a nice frame and looks at it every day with a feeling that he is better off by knowing this good man. Dr. Taylor was born in Attica, Ind., in the year 1856.

The following letter will explain itself:

Dr. Edward Register,

Editor Charlotte Medical Journal,

Charlotte, N. C.:

Dear Sir:—I thank you for the copy of The Charlotte Medical Journal which you have sent me. In the article on Renal Infection there is an error likely due to a mistake in my manuscript but possibly due to copying—the paragraph on the right side of page 94 where Pyelography is being discussed, sodium bromide is mentioned, this should be sodium iodide. Sodium bromide should not appear at all in that paragraph and each time should be substituted by sodium iodide. If you

will print correction for this in the next issue of The Journal, I will thank you very much.

Yours very truly,

WM. M. COPPRIDGE, M. D.,

Watts Hospital,
West Durham, N. C.

Prophylaxis of Influenza.

If we may judge the future by the past, there is likely to be a recurrence this fall and next winter of the influenza epidemic which resulted in the death of nearly half a million persons in this country a few months ago. In the event that this forecast proves true, what can physicians do to limit the spread of the disease and lessen its terrors?

Immunization with a reliable vaccine would seem to offer the best solution of the problem. Clinical reports on the use of preventive vaccine, as published in various medical journals in recent months, warrant this conclusion. Three instances are here cited:

In Cleveland, Ohio, last spring 3427 prophylactic injections of influenza vaccine were given to the employes of a large manufacturing plant. Of those who received one injection, 378 developed the disease; of those who had two injections, but 37 were affected, while of those who received the full course of three injections, only three contracted influenza. Of the whole number attacked, seventeen died. Eleven of these had not been treated prophylactically, while the remaining six had but one injection.

In the Kentucky Medical Journal for May, 1919 (page 199), the editor says: "The reports from some three hundred thousand cases indicate that the vaccine (Rosenow) decreases influenza, almost entirely prevents pneumonia, and in practically no case where it was used had death occurred."

In the Canadian Medical Association Journal for June, 1919, Major F. T. Cadham, C. A. M. C., reports his observations on the use of preventive vaccine in the influenza epidemic in Winnipeg. He says: "I believe the vaccine used as a prophylactic for the members of the Canadian Expeditionary Force of this district to have been of value. The incidence of pneumonia was less than one-half and the mortality rate less than one-fourth in the inoculated, as compared with the uninoculated, admitted to the special hospital under similar conditions."

BOOK NOTICES

"Vaccine Therapy in General Practice," by G. H. Sherman, M. D., also quotations from other authors. Third edition. Published by G. H. Sherman, M. D., Detroit, Mich.

The underlying basis for further development in progressive medicine depends upon accurate interpretation of scientific investigations. In considering the progress of Vaccine Therapy and its important contributions to the science of medicine, all elements that enter into its development should be ascertained and the principles pertaining to its application recognized.

This book, as its title indicates, is meant for the physician in active practice. No attempt is made to enter into a minute description of bacteriological laboratory procedures, or to detail the complex phases of bacteriopathology. The author's aim is to present scientific observations on vaccine therapy which are of value in the treatment of infectious diseases met in every day practice. Accordingly, it records in concentrated form his experience with Immunotherapy, supplemented by much data, drawn from publications dealing with this subject. The first part of the volume reviews briefly the underlying principles of vaccine therapy, the remainder is devoted to a discussion of its indications, limitations and applications.

We feel sure that this third edition will serve a great purpose. Much additional knowledge has accumulated during the past few years, greatly extending the scope of therapeutic and prophylactic immunization which necessitates a much more extensive presentation of the subject. The book has been entirely rewritten and the chapters which deal specially on the treatment of diseases have been rearranged to make the subject under consideration conform, as nearly as possible, to infections of the different parts of the body that perform certain functions, by this arrangement, specialists may readily refer to the subject in which they are mostly interested.

Those who have a personal knowledge of the value of vaccine therapy, need no more evidence that it has attained a permanent place in modern therapeutics. To those who have hesitated to form a personal acquaintance with it, perhaps purely on account of academic pronouncements, or, because of a vague fear unfortunately brought on by prejudice, the

writer says that progress and development, in all branches of scientific medicine, is possible only by applying facts impartially and by discarding all obstructing elements. This is essential to the advancement of knowledge. Deductions as to scientific interpretation of facts cannot be based upon prejudice and academic speculations. In this regard the author earnestly offers the words of Huxley: "Sit down before a fact like a little child; be prepared to give up every preconceived notion; follow it humbly, wherever it may lead you or you shall learn nothing."

The book contains 523 pages with many illustrations. On account of the rapid advancement of Serum and Vaccine Therapy I value this book very highly because it is new and written by an expert.

"Quarterly Medical Clinics." A series of consecutive clinical demonstrations and lectures by Frank Smithies, M. D., F. A. C. P., associate professor of medicine, School of Medicine, University of Illinois; Gastro-Enterologist to Augustana Hospital; Medical Consultant to U. S. Marine Hospital; formerly Gastro-Enterologist at Mayo Clinic; Fellow of the American Gastro-Enterologist Association, etc., Augustana Hospital, Chicago. Published by Medicine and Surgery Publishing Co., Inc., Metropolitan Bldg., St. Louis, Mo. Annual Subscription \$5.00; paper \$8.00 cloth. Single copies \$1.50, paper; \$2.25 cloth.

"Famous Generals of the Great War, by Charles H. Johnston, author of the "Famous Leader" series; illustrated with half tones of the principal leaders of the Allied armies in France; 310 pages; \$2.00 net; the Page Company, Beacon street, Boston, Massachusetts.

This early autumn work by Mr. Johnston is one of the first books appearing that gives a biography of the Allied leaders, the men whose names for four years figured largely in the world's great war.

The book is exceedingly interesting to Americans because it well sets forth the part that America played in the recent war, and the description of Chateau-Thierry, and the bravery of the American troops, will thrill every reader. The work is intended primarily for boys and young people, but it will appeal to the older reader, and to every man who admires heroism and esteems a great military leader.

"Famous Generals of the Great War"

will take its place with Mr. Johnston's other works on adventure, war and outdoor life, as one of the valuable books of the day.

"The Business Career of Peter Flint," by Harold Whitehead, author of "Dawson Black, Retail Merchant," and other works; each cloth decorative, illustrated, 363 pages; price \$1.50; the Page Company, 53 Beacon street, Boston.

This rather novel work, dealing with the exciting and manhood testing experiences of a youth who tries to "break in" to the big business world in Boston, is handled by Mr. Whitehead in a masterly manner, and the interest in the novel is sustained from the first page to the last.

Peter Flint is sent to Boston by his father, small town druggist, in easy circumstances, with only a few dollars weekly allowance, and is told that he must make his own way and show what stuff is in him. Peter has a high temper and the temptations are also strong, and he does force a friend's name to a note which he has given a loan-shark. In the end it is friends that save Peter and one wonders what becomes of youths like him who go to Boston and do not encounter such good friends. The author is frank however and says that many of the friendless adventurers lose out.

Peter tries half a dozen kinds of business and is fired, quits, or resigns for another job, right up to the last page and the reader wonders if there should not be a sequel telling of Peter's farewell even from this last job.

War Headache and its Surgical Treatment.—Rawling (British Medical Journal) urges that in the treatment of war headache the following steps should be taken: 1. That all other measures should be given free and fair trial with a probationary period of about three months, unless urgency prevails. 2. That operation should be reserved for the more acute cases and for those more severe chronic cases where the patient is rendered miserable by reason of headache and associated incapacity. 3. That the operation should be so conducted as to provide adequate decompression effect, and that trephining should be carried out under cover of the temporal muscle. There should be such removal of bone and such dural incision as shall allow the escape into the temporal tissues of the excess cerebrospinal fluid, sufficing to lower adequately the intracranial pressure.

Miscellaneous.

Intrasacral Procaine Anesthesia for Hemorrhoids.—Meaker, in The British Medical Journal, recommends intrasacral and extradural injections of procaine in association with preliminary injections of hyoscine and morphine as preparatory to operations for hemorrhoids, fistula and other operative conditions in and about the anus.

Meaker says that one may employ this method with practical certainty of success, providing the technic has been mastered. Usually, the anesthesia is limited to a circle around the anus three or four inches in radius, but, in some instances, the whole of the buttocks may be analgesic. In addition to the operations already cited, Meaker has incised several perineal abscesses, and four times he has operated for urethral stricture under the anesthesia produced by this method. Cases have been noticed where the skin of the scrotum and penis is fully anesthetized, but, this is exceptional and cannot be depended upon.

After a preliminary dose of hyoscine-morphine, according to the magnitude of the operation, age, weight and physical vigor of the patient, and the latter's mental attitude, the author proceeds as follows with the intradural injection of procaine.

The first step, and a most essential one, is to determine the position of the sacral hiatus. Usually, this presents no difficulty, but, in patients well padded with fat in that region, it may be almost impossible to recognize the bony landmarks. The routine is as follows: Feel the tip of the sacrum, which usually lies just at the top of the anal cleft and is the lowest prominent bony point of the spine. Then, to make sure that what has been felt is the lower end of the sacrum and not a displaced coccyx, feel the tip of the coccyx in the anal cleft. Next, press the ball of the right index finger, pointing toward the patient's head, firmly against the back of the sacrum at its tip in the median line and, without sliding the finger along the skin, work slowly up along the dorsal aspect of the bone. The finger will be felt to come into the apex of the inverted V which is formed by the sacral cornua. The common variations from the normal in position and size of the hiatus are to be kept in mind.

The injection is to be made through the approximate center of the hiatus. The

exact site of this point must now be marked out, for, after a superficial injection the bony landmarks will no longer be palpable. Bearings may be taken relative to the anal cleft and to some such skin mark as a pigmented mole. A more accurate method is, to dip a needle in tincture of iodine and to mark out on the lower back and right buttock lines of "latitude" and "longitude," converging at a right angle upon the proper point. Care must be taken not to fall into error through the sliding of skin over bone under pressure of the finger.

An area the size of a florin over the hiatus is now painted with iodine, and a drop of procaine is injected into the skin with a fine sharp needle. Before this is done the patient should be warned that he is about to feel a sharp "pin-prick." Another drop is put into the membrane which occludes the hiatus. This membrane is well supplied with sensory nerves, and, unless these preliminary injections are carefully done, the insertion of a large needle will give considerable discomfort.

The intrasacral injection is best made with an ordinary lumbar-puncture needle of medium caliber. For insertion into the bony canal, this should be equipped with a stylet and detached from its syringe. It is held perpendicular to the plane of the back, passed through the skin over the central point of the hiatus, and pushed on until it encounters the resistance of the fibrous membrane. The outer end of the needle is now carried towards the patient's feet through an arc of 90 degrees in the midline of the back, so that the needle lies in the plane of the back, pointing towards the patient's head in the midline. During this last manoeuvre, care must be exercised lest the point of the needle be displaced from the center of the hiatus. The needle is now to be pushed as it lies straight up the back. The piercing of the membrane may require some little force, and as this occurs a characteristic "crunch" can be felt and, often, heard. The needle should be pushed on for about two inches, when its further advance will be blocked by the antero-posterior curve of the sacral canal.

The correctly placed needle will lie in the plane of the back and in the line of the sacral spines. Its point will be movable with fair freedom within a limited range from side to side, but not at all from back to front; it will, of course, not be palpable under the skin.

There are three common errors in the placing of the needle: (1) The needle may lie in the plane of the back and in the line of the sacral spines, being at the same time entirely superficial to the sacrum. In this case the needle point will usually be visible and palpable when it is moved, and there will be superficial edema when the solution is injected. (2) The needle may enter the mass of muscle at one side or the other of the sacral spines. In this event it will have an obvious inclination toward the anterior aspect of the patient instead of lying in the plane of the back; it will also deviate somewhat laterally from the line of the spines. (3) In many cases where the needle has entered the sacrum correctly its point catches under the periosteum lining the canal. When this happens, the lateral mobility of the needle is lost, and very great force is required to make the injection.

If at the first attempt one fails to place the needle correctly, the best plan is to withdraw it entirely, and to try again after carefully noting the markings of the hiatus. Provided the preliminary injections have been efficiently done, one may "feel" for the membrane with the point of the large needle, but, this will be a hopeless task unless the original "geometry" has been accurate. If the third of the above errors be encountered, the needle should be withdrawn about half an inch and rotated on its own axis through 180 degrees.

The stylet is now removed from the needle. No cerebrospinal fluid should, of course, appear. It is impossible to tap the spinal theca by this route unless one of three conditions exists:

1. An abnormally low dural sheath.
2. An abnormally capacious sacral canal antero-posteriorly.
3. A curved needle.

Nevertheless, in one case indirectly known to the writer this accident occurred. The full dose of procaine was injected, fortunately with no worse result than an anesthesia of the lower half of the body lasting forty-eight hours.

The injection now used is 20 mils (Cc) of a 2-percent solution of procaine in sterile water to which have been added five drops of 1:1000 adrenalin. Formerly the same quantity was employed of a solution containing procaine, 2 percent; sodium chlorate, 1-3 percent; sodium bicarbonate, 1-2 percent.

According to a French writer, the sodium salts favor the absorption and re-

tention by nerve trunks of a surrounding fluid. Clinically the results have been the same, whether or not these salts were present in solution. It will be noted that the amount of procaine exceeds 6 grains. As much as 15 grains has repeatedly been used in a local or regional anesthesia, and even 35 grains has been injected without the slightest evidence of toxicity. Such trouble arises much oftener from old and decomposed adrenalin than from procaine.

The Climacteric of Life.—Guthrie Rankin submits a clinical survey which shows the importance of the climacteric period of life, not only in women, but in both sexes. The history of every life is a gradual ascent from the time of birth till its fastigium is reached, and from that point one of decline until it finds its termination in death.

The climacteric period, which coincides with life's full maturity, is the time of special liability to the development of disease, hereditary or otherwise. It is well recognized in women, but it is not so generally appreciated that men go through a similar readjustment of tissues, though probably at a later age. Since at this time the protective powers of the body are less active, acute illness is attended with more than average risk.

The immediate counterpart in man of the ovarian changes which take place at this time in women is probably to be found in the structural alterations which become established in the prostate gland. It is not surprising that growths of malignant type so often date their inception from this period of unstable tissue life.

Most interest, however, attaches to the chronic ailments met with at this period of life, and the author selects three that are commonly met with in men and three more unusually encountered in women. Although each ailment may be considered as an entity, they are each related to the other and none is really self-contained.

Arteriosclerosis, interstitial nephritis, and diabetes form a group frequently seen in men between fifty-five and sixty-three. Each may be regarded as evidence of a breach of tissue integrity, and in all three cases the common causative antecedent is continued strain—domestic trials, financial worries, emotional storms and mental anxieties.

The stress of carrying on falls primarily upon the nervous centers, the result being neurasthenia. More often than not these ailments overlap one another, and

all three are frequently seen together, and their close association makes the onset of one almost certainly the prelude of the others.

The indications as to preventive treatment are simple: the strain of life must be ruthlessly curtailed; work must be lessened and leisure cultivated; the diet must be adjusted to the necessities of the condition and the capacity of the damaged organs. A weekly grain of calomel will provide for free action of the liver, and periodical small doses of iodide and nitrate of sodium with arsenic will help to keep the blood tension low, and possibly aid in delaying the thickening of arterial walls.

The causative influence in all three conditions is probably a toxemia, by which metabolism is more or less seriously interfered with.

Treatment, therefore, should be directed toward combatting toxicemic intoxication. In colitis douches are sometimes useful, but they may create an undesirable reflex action upon a nervous system already touchy. Beta-naphthol, bromide of ammonium, and bismuth is a useful combination, to which may be added an occasional dose of calomel or podophyllin. A tablespoon of liquid paraffin should be taken before breakfast every morning.

The abdominal wall may be supported by wearing a suitable belt. In rheumatoid arthritis guaiacum is an efficient remedy and should be used in combination with sulphur. The usual treatment by bromides, strophanthus, thyroïdin and arsenic is indicated in cases of hyperthyroidism.

In both sexes, however, the success of treatment lies in convincing the patient that the years are beginning to tell their tale and that a new and more subdued plan of life must be adopted.—British Medical Journal.

The Period of Incubation of Syphilis.—Jambon and Tzanck (Paris Medical) say that the first period of incubation is considered to exist until the appearance of chancre, then the second period begins with the onset of the roseola.

This incubation in stages makes of syphilis a very special disease. In most infectious diseases the initial lesion remains unknown; the evolution taking place either in the depth of an organ or in the thick tissues of mucus, and the lesion apparently latent clinically until the first definite symptoms appear.

The ancients used to consider these de-

lays as the proper character of the disease, although they recognized in them various phases of its development.

Such a conception is strengthened: (1) by the modern researches on the humoral modifications in infectious diseases; (2) by the assimilation with the latter of reactions caused by hereto-albuminous injections.

A number of studies, such as those of Metchnikoff, Richet, Ehrlich and others, have altered the established conception as to the humoral pathology of syphilis.

Antibodies are in excess in the blood and it is a fact, not a hypothesis, that there is definite change in the humors of the organism during the "periode d'etat".

In diseases with a rapid onset the appearance of humoral phenomena marks the invasion phase, and fever emphasizes the perturbation of the various regulating automatisms.

In disease with slow onset, the invasion may pass unseen until a more detached or obvious symptom is noticed, such as the appearance of chancre in syphilis.

According to the old conception initial sclerosis is really the first symptom, but, from the standpoint of general pathology, such is not the case.

Among humoral modifications to be noticed are: (1) In the blood, appearance of the reaction of fixation of the Bordet-Wassermann complement and augmentation of the refractometric power of the serum. (2) In the cephalo-rachidian fluid, modifications of the pressure of the lymphocytosis; of hyperalbuminosis bearing especially on the quantity of globulin; reaction on iodine; stabilizing action on colloidal gold; positive Wassermann in a certain number of cases. All these signs are invariably missing when chancre is first formed. The forty-five days of the second incubation are, therefore, far from being a homogenous period. All the various humoral phenomena come in degrees revealed by such symptoms as cephalic anemia, temperature, roseola. In practice the second period may be said to begin very soon after the 21st, after the appearance of the chancre; that is to say, 40 days after inoculation. Neisser's works give weight to his assertion. It is known that in the presence of a foreign agent the organism can present itself under various states, either receptive or refractory, immunized or sensibitized; namely, constituting what von Pirquet calls "allergia", and Siebert "anergia", since syphilitic is not protected from his own treponema. In the progression

of the disease the organism modifies itself, indicating a systematized syphilitic reaction.

It is also known that early reinoculations are, in every way, similar to the initial infection, when, on the contrary, late reinoculations present only non-ulcerated tuberculo papulas.

In 6 months time, over 1100 patients have been admitted to the venereal wards. In the out-patient department and approximately 25,569 injections were given during that period and the numbers of cases submitted to other treatments varied between 1183 and 11.

One of the most troublesome complications encountered was epididymitis. The measure taken in acute cases was epididymotomy, while in chronic, recurring cases excision was applied. Stricture of the urethra was another frequent complication. The method used consisted in distending the urethra with oil or liquid petroleum and inserting whalebone and rat-tail bougies of increased calibre, which guided them into the bladder.

Absence of Cancer in the Arctic Regions.—Ross, in *The London Lancet*, on the authority of Vilhjalmur Stefansson, the Arctic explorer, who has returned recently from an expedition to the Far North that cancer does not exist among the Esquimaux. Moreover, Ross has been told also by Sir William MacGregor, Dr. W. T. Grenfell, Mr. Frank Benzley, and Rear Admiral Peary that they had never seen a case of cancer among the native tribes of the Far North. If it may be assumed that cancer is absent from the Arctic regions, and the assumption seems justifiable, the fact, Ross says, gives rise to some interesting reflections. In the first instance, the Esquimaux are perhaps the most carnivorous race of human beings in the world, and consume few vegetable; therefore, the non-existence of cancer among them would appear to weaken one of the dietetic theories of the cause of this disease. There seems to be no racial or physiological difference which would exempt the Esquimaux from cancer, and, in addition, the observations of Panum, fifty years or so ago, that cancer was either extremely rare or did not exist in Iceland or Greenland, in the settlements peopled by Europeans, would imply that race does not enter into the question. Consequently, as Ross points out, the climatic explanation is the most plausible, and this tends to revive the parasitic theory of origin. The cold in the Arctic

regions is too intense for saprophytic organisms to live, and diseases conveyed by aerial convection, such as "colds," are unknown. Ross is of the opinion that cancer may come in a similar category, and that its cause is an organism which invades the body from without which is airborne in part of its life history, and which heretofore cannot exist in the Arctic climate. If it should prove to be a definite fact that the Far North is free from cancer, then the search for a satisfactory explanation of this fact will be interesting.

About the Toxicity of Muscular "Autolysats" in Cases of Shock.—Delbert and Karajonopoulos (*Bulletin de l'Academie de Medecine de Paris*).

Some experiments were made by these gentlemen in order to determine the "role" of intoxication in traumatic shock. They consider this as very important, the toxicity of bruised tissues being now a well known fact.

Without the interference of any bacilli the bruised tissues acquire spontaneously a high tonic power, and this may develop in the organism precisely the characteristic features of shock.

Tissues of dead animals were put aside immediately after death had occurred, finely lacerated, and kept in normal saline solution at 37 degrees C. After sometime the whole was filtrated through a thin gauze, and the fluid part, containing the "autolysats", injected into the peritoneum of an animal of the same variety.

Tests were positive with guinea-pigs and rats, negative with dogs, according to the impossibility of obtaining aseptic "autolyse".

The "autolysats" obtained from tissues of gray rats, proved very toxic especially if the animals had been fed much meat.

A few seconds after the infection, the animal would collapse into coma, the rate of breath increasing to 140 a minute; then it would become quite unconscious; gradually the rate of breath would fall to 40 and even 30 a minute, and the animal would soon die.

Among 22 rats injected, 2 healed and 20 died, after intervals of from 5 minutes to 20 hours. Intoxication of the nervous system seems responsible for cases of sudden death.

The reaction to the toxic power of these autogenous toxins is essentially different according to each animal.

A certain dose of toxin seems less dangerous if previously diluted.

They consider that the symptomatic

treatment should be associated with a pathogenic treatment as soon as possible, either by amputation, if the limb seems helplessly ruined, or by thorough resection of all bruised tissues. This should be done while the patient is still suffering from all shock symptoms.

Early Mobilization in the Treatment of War Wounds.—Kouindjy (*Paris Medical*) says that, after four years of war, the utility of early mobilization in the treatment of war wounds is no longer open for discussion. An approximate comparison between the numbers of cases of ankylosis and impotence due to muscular atrophy in 1915 and 1918 shows a real improvement in our methods of treatment. It must, however, be admitted that this improvement is not so general as it might be, and that troublesome cases still occur.

He gives in detail a case of ankylosis and stiffness of the finger and wrist joints, together with fibrous ankylosis of the shoulder. This case, resulting from a parinaris on the fourth finger, complicated by a phlegmon on three fingers, he declares is explained by the prolonged fixation of the patient's arm. During the first five months of treatment, the surgeons were so taken up by the wound itself that no notice was taken of the glenohumeral joint. The author previously drew attention to ankylosis of the shoulder caused by a fracture of the radius, and to that of the instep resulting from a seton wound either in the thigh or in the gluteal region.

In order to explain the pathologic phenomena due to prolonged immobilization, he quoted the work on trophic troubles caused by excessive fixation of the joints, published in 1841 by Teissier. The author underwent the two first ankylosis processes described by Teissier: (1) Phasis of sero-sanguinous secretion; (2) Fibrous transformation of this matter and formation of false membranes.

The chief objections brought forward by ankylophiles against early mobilization of war traumatism are that, in their opinion, it delays the consolidation of fractures, prevents cicatrization and increases suppuration. These objections cannot hold after careful study. Injured joints must not be mobilized before complete consolidation of the fracture, but joints further removed should be mobilized from the beginning of the treatment, and the same should be applied, after consolidation of the fracture, to the injured joint and to those in its neighborhood.

He gives a case of musculo-articular impotence due to an open fracture of the upper third of the humerus, with wide, deep wound, smashed diaphysis and atrophy of the muscles of the arm, in which the normal functions of the limb were completely restored after 2 1-2 months of treatment, thanks to early mobilization of the joints.

A comparison between the two cases here recorded clearly shows the desirability of early and systematic mobilization in the treatment of war wounds. In the first instance, the patient wounded on March 9th, 1917, is still under treatment in October, although the original injury was but a panaris on the 4th finger; in the second, the patient suffering from a complicated fracture of the humerus was fit for active service on September 25th.

Conclusions: (1) All war wounds should be submitted to timely mobilization.

(2) Functional recovery of a joint should never be left to nature.

(3) Mobilization by hand should not be confused with mechanotherapy, which is often harmful. Progressive and methodical movement of injured joint can only be obtained by hand.

Some Aspects of Military Ophthalmology.—McKee (British Medical Journal) says that from a military point of view should teach a medical officer to size up his patient, and considerable latitude should be allowed the military ophthalmologist as to who sees to shoot and who sees enough for ordinary purposes.

Unless a soldier's vision is improved considerably by glasses he will not wear them, so there is only one reason which warrants prescribing glasses for a soldier; namely, that, by prescribing glasses, you change him from an unfit to a fit soldier. It is a grave mistake to prescribe them, for when you do you supply him with an excuse which he always has for lining up on sick parade. It is to be remembered that, in a soldier, complaints of headache or pains of any sort are not reliable symptoms of disease.

During the examination for refraction a variety of defects are found, prominent among them amblyopia ex anopsia. The author has not seen an epidemic of conjunctivitis among soldiers, and very few cases of gonorrheal ophthalmia. Trachoma has almost disappeared as a military disease. Among military symptoms of disease night blindness takes a prominent part. It seems that we may well attribute

this complaint or disease in a certain number of cases to exposure, hard work, and great fatigue. Syphilis of the eye is quite frequent. Sympathetic ophthalmia is very rare.

The concussion following modern explosives leads to a great variety of fundus lesions. The injuries are caused by the violence communicated through the bones of the skull, the bones of the orbit, or by air vibration—windage. One of the commonest of these lesions is a condition of traumatic retino-choroiditis, characterized by diffuse cloudiness of the retina, numerous small exudates in the choroid, and fine dust-like opacities of the vitreous. It is identical with retino-choroiditis of secondary syphilis.

One reason only should form the basis of all military operative work—necessity. Dacryocystitis is not infrequently met with. The author very strongly recommends the West operation.

Major Waldron has modified Esser's method of epidermic inlay for remedying distortions of the lid. He makes an incision in the conjunctival sac instead of through the eyelid skin. Major Gillies buries the graft covered mould in the subcutaneous tissues of the eyelid through an incision in the skin, and removes it through that incision. The second method may be termed an epithelial overlay.

Some Aspects of Military Ophthalmology.—McKee (Bulletin of the Canadian Medical Corps) speaks of the difference between military and civilian ophthalmology, and insists upon the desirability of having, in every military hospital, a special ophthalmologic section for the examination and classification of recruits.

A series of observations is then given, which may be summarized as follows:

In some cases of myopia and astigmatism the patient's vision was normal before proceeding to France, and the defect was probably due to high explosives. Epidemic conjunctivitis was trachoma have almost disappeared as a military disease. Cases of gonorrheal ophthalmia have also been very few in this campaign. Night blindness, on the other hand, has taken a prominent part; in a number of cases it is associated with retinitis pigmentosa. Out of 105 cases of iritis, Wassermann's reaction was positive in 33 and negative in 72; in 4 cases of retinitis pigmentosa the reaction was negative; in 11 cases of optic neuritis, 5 were positive, 3 negative; in 7 cases of interstitial keratitis, the reaction was positive in all; in

30 cases of retino-choroiditis 15 were positive and 15 negative. Out of 3000 ophthalmic cases observed, only 2 were cases of sympathetic ophthalmia. A large number and variety of fundus lesions have been met with, the commonest being a condition of traumatic retino-choroiditis identical with retino-choroiditis of secondarily syphilis. No attempt should be made to correct strabismus. The West operation is recommended for dacryocystitis.

Surgical Consideration of Peripheral Nerve Injuries.—Stookey (Surgery, Gynecology and Obstetrics) deals with the indications for surgical interference, and the technic of peripheral nerve surgery.

It is a fundamental principle of nerve surgery that all operations should be done in a sterile field and in the absence of the possibility of infection. Hence, secondary suture is the rule. Recrudescence of infection in an apparently healed wound must always be feared; therefore sufficient time must elapse to insure a clean, non-infected field.

The aim of surgical interference is to facilitate the normal process of repair by removing all causes hindering the down-growth of the neuraxes, and to facilitate their growth either through normal paths, i. e. by end-to-end suture, or down newly furnished paths, be they nerve transplants, or artificial conducting paths.

It is generally impossible to determine whether an injured nerve will recover without operation, except by waiting long enough to allow for evidences of nerve degeneration to manifest themselves. It is most important, therefore, to study carefully the progressive changes in the pathological signs.

So long as there are progressive signs of nerve regeneration, no surgical interference should take place. The earliest and most reliable signs of regeneration are: formation, shrinkage of areas of anesthesia, return of deep sensibility, return of muscle tone, and muscle sensibility. Usually in from 3 to 4 months some signs of nerve regeneration should be evident. By waiting so long no great time is lost, as usually during the greater part of the period the wound has been infected.

From a purely surgical standpoint, the earlier the operation is undertaken, the less difficult it is, and the better are its results.

Early exploratory operations are sometimes advisable, since, even with the most careful examination, it is impossible to

distinguish lesions with anatomical loss of nerve substance from those with interruption of conductivity and no concomitant loss of anatomical continuity.

A general anesthetic should always be resorted to.

Contractures should be corrected, as far as possible, before operation.

An absolutely dry field during operation is most necessary. Bits of torn muscle held over the nerve ends, or simply gentle and prolonged digital pressure, are advantageous for checking hemorrhage. The use of the tourniquet is to be avoided; each bleeding point should be dealt with individually.

When the nerve is imbedded in much scar and callus, it will be found safer to dissect from sound and normal tissue into scar.

When the nerve is freed from the immediate scar, it can be freed and liberated in its contiguous parts by gentle traction. Squeezing the nerve ends to make traction must be carefully avoided.

It is good procedure to cut only through the scar, using it as a means of fixation for the nerve ends. It is easier to suture with the ends fixed, and, by so suturing, there is less tendency to axial rotation and greater accuracy in maintaining the internal topography of the nerve. The more accurate the union, the more complete and the earlier the return of function.

Small, smooth, half-curved needles, with either fine silk or plain catgut, should be used.

The suture should include as little of the nerve as possible. The nerve ends should be brought gently into alignment without pressure or tension.

It is often impossible even at operation to determine whether or not nerve axes have reached the distal stump. If the axes are new and have not as yet reformed the motor end plates, there will be no electrical response, even though they have reached the distal stump. Correct judgment can only be gained by wide experience, and by checking observations by microscopical examinations of the excised tissue.

The 3 main types of operation are: nerve liberation, suture, either complete or partial, and nerve grafting.

Nerve liberation is successful only when the nerve trunk has been completely freed, and when there is no scar within the nerve. Otherwise excision and suture must be restored to.

In such cases where only a very slight interstitial scar exists, conservative meas-

ures may be attempted; by injecting salt solution under pressure, into the nerve, adhesions may be broken up, and new channels opened for the neuraxes.

Direct nerve suture should only be done when the nerve ends can be approximated without tension. Gentle traction may be used, but too strenuous a pull must be carefully avoided. By means of altering the position of the limb, a few centimeters may be gained in some instances. When excising scar within the nerve trunk, the excision should be as liberal as necessary, with no regard to the amount of scar removed.

Partial nerve suture is frequent in injuries of the larger nerves. The aim is to remove all interstitial scar without section of the normal nerve funiculi.

When the loss of nerve substance is considerable, grafting must be resorted to. The nerves are the radial, just below the elbow, and the musculocutaneous of the arm and leg, either as single or multiple grafts.

When possible, the nerve should be very loosely surrounded by a pedicle of fat selected with some considerations as to blood supply. The nerve trunk may be transposed among muscle bellies or imbedded in some adjacent muscle.

In a few particular injuries it may be deemed expedient to do tendon transplantation rather than some form of nerve bridging.

Injuries to blood vessels, including thrombosis and aneurysms, occur frequently as complications in operations for the repair of peripheral nerves. Occasionally they may not be diagnosed in time and may lead one into extreme operative difficulties.

In cases in which there is much pain, operation should be resorted to, even if there is some evidence of progressive nerve regeneration. In cases of causalgia immediate relief has been obtained sometimes after freeing the nerve from the scar, the callus, or from around bony exostoses. When the cause lies within the nerve, injections of 60 per cent. alcohol have been recommended.

Diagnosis of Chronic Infections with the Gonococcus by the Complement Fixation Test.—Bowman and Taylor (Bulletin of the Canadian Army Medical Corps) says that the tests carried out at the General Canadian Laboratory, it is evident that in chronic gonorrhea positive results of the discharges by the examination of stained films are very difficult to

obtain, chiefly because of the difficulty of obtaining gonococci either intra or extracellular.

In the discharges so few gonococci are present, or are so mixed with other bacteria that the Gram-negative diagnosis is almost impossible by freshly stained smears or cultures. In 1916 Muller and Oppenheim used as an antigen simply a suspension of gonococci in salt solution.

Teague and Turrey in 1907 emphasized the importance of using several strains of the gonococcus in preparing an antigen. Schwartz and Mc Neil emphasized it and stated that reaction never occurred in cases of anterior urethritis.

The authors have always used the anti-sheep hemolytic system. The first antigen prepared by Parke, Davis and Company, made from numerous strains, possessed excellent antigenic qualities. The titration should always be done before the actual fixation test.

The antigen is made isotonic by adding one part of 10.0% saline to nine parts of the antigen. This is then diluted again 1:10 with normal saline and titrated from anti-complementary properties.

When the test proper takes place the patient's serum should be used as soon as possible after taking the specimen. It should be free from cells and heated for one half an hour at 56 deg. C.

From the researches of the C. A. M. C. and others it can be definitely stated that the complement fixation test for gonorrhea is specific and must be relied on to confirm diagnosis, since cultural methods are not practical.

It should be borne in mind (1) that the test is never positive in localized anterior urethritis; (2) that the test is not usually positive before the sixth week of the disease; (3) that no cross fixation takes place with either syphilitic or tuberculous sera.

It is strongly recommended to keep tested and standardized antigens at hand on account of cultivating strains of gonococci.

The Standardizing of the Wassermann Reaction.—Emery, in the London Lancet, believes that a method involving the use of crude serum is the best as a means for the diagnosis of syphilis. The problem he takes up is: "What strength of reaction is to be regarded as being necessary to diagnose syphilis?" In a just positive W. reaction there are three reacting substances in a state of equilibrium. Should more complement be added, it

will remain free, but will be absorbed if more serum or more antigen is added. The question is to titrate the unknown substance, the strength of which is to be determined by means of two standard solutions, the excess of either of which is compensated for (within certain limits) by the corresponding excess of the other.

The difficulty of the problem will be understood when it is said that reagents cannot be standardized by ordinary chemical or physical processes. There seems to be no starting point. How is it possible to obtain trustworthy results in actual practice? The author thinks it is largely a matter of personal equation on the part of the experimenter.

The first essential is for experimenters to agree on some unit, some standard to which all results can be compared; not that this uniform technic should be imposed in practice, but used when comparison is needed.

In his technic d'Este Emery uses a five per cent emulsion of sheep's corpuscles, measured in a graduated pipette; he does not centrifugalize to constant volume in a graduated tube. The standardization of the complement is carried out with the same emulsion.

In actual practice he uses 40 amboceptor units (of his own) per cc. The author emphasizes that his units are not fixed units, but only relative one to the other. After the dosage of the amboceptor, according to Macintosh and Filde's method, he proceeds to the standardization of the complement, and afterwards to the preparation of the Antigen-complement mixture.

He thinks that standardizing the complement in presence of the antigen enables one to state without hesitation the actual amount of complement used in the test. On the question of mixing just before the test, and not making up a large volume of the test fluid for use throughout the test, he does not find there is any continued absorption of complement for the first two hours after the two fluids have been mixed.

The author points out that preparing a standard Wassermann unit by the use of antigen composed in a definite manner is possible and that the absorption of the two clear units of complement should be taken as a standard unit.

Antigen prepared after his manner remains remarkably constant; syphilitic sera, ascepticised, remain also constant for over a month at room temperature, enab-

ling the experimenter to repeat observation.

Too much stress can not be laid on the use of accurately standardized syphilitic sera since it secures a scale of comparison for experimenters. It would, of course, be important to agree on some definite unit, common to all laboratories for the Wassermann reaction.

Adjustment of Response to Nerve Stimulus in Voluntary Muscles.—Levick (British Medical Journal) bases some conclusions on the results of tests made upon many hundreds of men, and including every grade of nerve injury. Records were taken of the height, rate of rise, and rate of fall of the curve produced by the contraction of a muscle by means of an interrupted galvanic current. In every case the affected muscle was compared with the healthy counterpart. It was found that when a normal muscle was subjected to a series of stimuli of varying strength it responded by a succession of contractions of varying height, but of uniform duration. The duration of the contraction of a given muscle is the same, whether the stimulus is short and sharp or long and diffuse. Slight diminution of the conductivity of a motor nerve by compression or injury causes a slight lengthening in the wave of contraction of the muscles which it supplies. Abnormal and persistent increase in the stimulation of a motor nerve through irritation, leads to a shortening of the duration of the contraction of the muscles supplied. After suture of a nerve and its regeneration the faradic response of the muscle is the first to appear, then the muscle begins to respond to electrical stimulation with a slight shortening of the contraction curve. This is followed by a period of further shortening until, after complete regeneration of the nerve, the muscle contraction curve is lengthened until the normal is restored. The study of the duration of muscle contraction curves promises to prove of considerable value in diagnosis.

The Open Air Treatment of Influenza.—Brooks (The American Journal of Public Health) says that when this influenza broke out, the autopsies at the Naval Hospital showed that the men died not from heart failure, but from abscesses in the lungs. This explained why heart stimulants had had practically no effect on the cyanosed patients, and that they died not from heart failure but from lack of air.

Thereafter, on pleasant days, every patient was taken out of the tents at the Tent Hospital which had been rapidly set up. From the first day the results were startling.

At the end of three weeks the epidemic on the ships was practically under control, and in a few days over four weeks the Tent Hospital was closed.

The following facts were deduced from the experiences of the first tent hospital:

The period of incubation apparently varies, averaging about two days. Fatigue seemed to play an important part.

The infection itself was a mixed infection, and where Type III of the pneumococcus predominated many of the cases were fatal.

Very little medicine was given after the value of plenty of air and sunshine had been demonstrated. Practically only three drugs were used: Dover's powder, some form of aspirin, and iodide of lime in one-third-grain doses. The patients were fed every two or three hours, and given a variety of food with plenty of fruit. They were also made to drink plenty of water.

Improvised wire masks were made out of ordinary gravy strainers. The strainer was made to fit the nose, and 5 layers of gauze were simply basted on to the wire frame. The gauze on the masks was changed every two hours.

Every nurse and attendant was cautioned that, after working over patients, the hands should be washed thoroughly either in 1-1000 corrosive sublimate solution, or in a solution of triple lysol.

The efficacy of open-air treatment has been absolutely proven, and one has only to try it to discover its value.

Prevention of Military Epidemics of Cerebro-Spinal Fever.—Glover (Journal of Hygiene) draws the following conclusions from carefully conducted observations in dealing with the control of epidemic strains of meningococcus in variously housed detachments of the British Army.

A high meningococcus carrier-rate in a military unit denotes dangerous overcrowding. The distance between beds is of paramount importance. Severe overcrowding, i. e., when beds are less than a foot apart, is usually accompanied by a carrier-rate of at least 20 per cent. This is the danger line indicated in the War Office Memorandum on Cerebro-Spinal Fever, March, 1917.

Carrier-rates of between ten and twenty

per cent are unsatisfactory and imply overcrowding. They must be watched with suspicion, and the mobilization standard must be strictly enforced. A carrier-rate of this height will usually imply that the mobilization standard of forty square feet per man has been infringed, and also that beds are less than a foot apart.

A carrier-rate of twenty per cent should be a signal for prompt action to abolish overcrowding, to improve ventilation, and to increase distance between beds to at least two and one-half feet. The "peace" standard of three feet between beds, and sixty square feet of floor space with six hundred cubic feet of air, would, of course, be more effective.

But the mobilization standard, introduced for a grave emergency, is the lowest possible concession to military necessity which can be allowed with safety.

Nephritis in Relation to the Recent Epidemic of Influenza.—Symonds, in The London Lancet, gave a history of previous nephritis or of scarlet fever. The average age was 25.3 years. The average physique in the series was good.

In only one case of the series was marked edema observed, the distribution of the fluid in this case being general and the amount extreme.

The most constant feature of the nephritic cases was the early onset of an acute confusional mental state, progressing rapidly to noisy and active delirium, with incontinence of urine and feces, and every appearance of profound toxemia.

The volume of urine in each 24 hours was seldom diminished more than might have been expected with the high fever and pneumonia, the lowest average daily output for the first two days being 30 oz. per 24 hours, the highest 65 oz.

Microscopical examination of the centrifuged urine showed an abundance of casts, both granular and hyaline, with a striking absence of blood cells.

The postmortem examinations showed in most cases an enlarged and firm spleen. Microscopical examination of the kidneys showed in at least four cases (possibly also in four others) evidence of pre-existing renal disease.

The present observations seem to show that persons whose kidneys are previously damaged by disease are especially prone to die from bronchopneumonia in this epidemic.

Conservation of Man Power at or Beyond Full Maturity.—Systematic training always benefits unless there exists some latent defect, which should have been discovered and guarded against. Certain fundamental facts should be borne in mind by everyone: The motor impulses of childhood are divinely implanted instincts for the acquisition of symmetrical development, contributing to safety and efficiency as an animal and also to intellectualization. Unless habitual body use is encouraged, along with suitable opportunities for the play of spontaneity, full competency is never attained by the individual. It is possible, however, even in late life, to repair weak spots. Contrary to the general opinion, little time and effort are required to get into condition. Vital processes are stimulated by renewals of any form of mental or physical activity. It is important to insist upon hygienic measures and educative exercises that will establish a due proportion between food intake and outgo of waste products, and between inherent powers of motion and such use of active parts as shall maintain mobility, elasticity, pliancy, hence motor competency not only for direct use but for supplementing the oxidation processes. This can be done by keeping in mind plain rules of posture and completeness of movements commonly employed. In addition to this, all that may be demanded is a few moments' daily of fundamental movements in normal directions; or if not daily, twice or thrice a week. By attention to diet and personal hygiene it is often possible not only to re-acquire good health, but to develop unsuspected latent powers. The important question is not what one should eat, but rather how one eats and how much one eats. Underfeeding in certain states is a peril, but in a much larger group overfeeding is a direct, perhaps the sole cause for organic derangement and degeneration. An excess of protein food results in a large group of hurtful effects. Horace Fletcher has demonstrated the value of proper mastication of food, and for temporary purposes a reduction of diet to simplest articles and the smallest variety is of life-saving efficacy. When digestive processes or harmonies are in doubt, simply omit one or more meals till equipoise returns. Much is to be said in favor of a diet of nuts, fruits, cereals, with or without milk and eggs, an excess of meat and sugars should be avoided; alcohol is objectionable. Few factors in personal hygiene are more important than

the care of the skin. Friction, with the faithful use of the flesh brush, is superior to the careless bath. To avoid the evil effects of chill, of catarrhal states, and to keep the kidneys in good order, few measures are superior to salt friction baths. As a routine procedure Madison Taylor recommends the following: On rising throw off the clothing and rub the entire body briskly for five minutes; resume a covering and proceed with the toilet; or better, take a sponge bath, using a rag dipped in cool water on which is placed a small handful of salt. Rub this thoroughly all over the body, rinse off with cold water, and rub dry.—British Medical Journal.

Bladder Injuries in Wartimes.—Fullerton (British Journal of Surg.) says that injuries to the bladder form a very small proportion of the total wounds reaching the base hospitals. The proportion is about 1:3000 or 1:4000. Prognosis depends to a great extent upon associated injuries. The author's report is based on a series of fifty-three cases, thirty-five nearly 70 per cent, being complicated by injury to the intestines, or bone or both. In twenty-six cases there was an injury to some part of the lower intestine and thirteen of these were also complicated by some bone fracture. Nineteen cases were complicated by injury to the rectum. The small intestine was also injured in six cases.

The mortality of bladder injuries is very high. There were in this series of cases thirteen deaths. The chief causes of death have been pelvic cellulitis, peritonitis and sepsis. The chief sequelae are bone necrosis, cystitis, calculus and stricture of the neck of the bladder.

Digestion of the Oesophagus as a Cause of Operative Haematemesis.—Pringle and Teacher, in The British Journal, of Surgery, give details of 15 cases in which they consider it most probable that digestion of the oesophagus occurred during life. In 11 of these cases there was vomiting of brown or black materials, or actual haematemesis. In eight cases the condition in the oesophagus was advanced—destruction and perforation. In seven it was early. In eight cases there was no digestion of the stomach. In seven there was slight digestion of the stomach. In nine of the cases there had been operations and in six there had been no operations.

The writers admit that the digestion

may continue after death, so that further digestion occurs before the case comes to the post-mortem table. On the other hand, these post-mortem changes may have the effect of obscuring indications of vital reaction, such as formation of fibrin in the pleural sacs, sub-mucous and intramural haemorrhages.

They conclude: "The post-operative vomiting of black material or haematemesis is a symptom of great importance to the practical surgeon. In some cases the cause of these symptoms appears to be digestion of the oesophagus. This condition may vary in different cases, from superficial erosion of the interior of the oesophagus to perforation or widespread destruction of the tube and damage to adjacent structures. The vital nature of the condition is shown by the presence of haemorrhages into the oesophageal wall, lungs and pleurae; while, in one case at least, inflammatory reaction was observed in the lungs and pleural sacs.

The vomiting of black material or actual haematemesis was observed in eleven out of the above fifteen examples of digestion of the oesophagus found at post-mortem examination. In six of the cases no operation had been performed, but these were all of a severe infective or toxic nature.

In contrast with the state of the oesophagus, there was usually little or no digestion of the stomach.

In conclusion, we submit that digestion of the oesophagus may occur during life, and that as a result blood may be vomited.

That this digestion may take place in any disease in which great lowering of vitality occurs.

That ante-mortem digestion of the oesophagus is one cause of post-operative haematemesis."

Safeguarding The Weak Heart.

The sufferer from chronic heart disease needs constant attention to his digestion and nutrition. An attack of indigestion or a slight "falling off" in the nutrition may so increase the burden on an hypertrophied heart that its compensation may be lost forever. At the first sign, therefore, of digestive trouble or Glycerine Tonic Comp. should be administered in usual dosage. Its therapeutic action is promptly manifested, and the effect of this dependable tonic in restoring to normal activity, reduces without delay the stress under which a weak and defective heart may otherwise be forced to labor.

In addition to the important service it thus renders by stimulating vital functions throughout the body, Gray's Tonic Comp. acts directly on the heart, imparting tone to the cardiac muscle and aiding and supporting its action.

To sum up the effect of Gray's Tonic Comp. in the treatment of cardiac patients, it is evident that it not only increases the power of the heart, but materially decreases the "load" it has to carry.

Early Administration Important.

Pneumonia Phylacogen was successfully employed last winter in many influenza cases. Early administration of this product, in most instances, resulted in marked improvement, cutting short the influenzal attack and preventing pneumonia.

A number of physicians in one large city employed Pneumonia Phylacogen as a routine measure in all cases of influenza with excellent results. One mil (Cc.) was administered subcutaneously on the first day, two mils on the second day, and three mils on the third day, the dosage each day being gradually increased. The interval between doses was twenty-four hours, although in some cases the Phylacogen was administered every twelve hours, and in a few cases every eight hours.

Many physicians last winter carried one or two ten-mil vials of Pneumonia Phylacogen and employed it at the first indication of influenza, thus curbing the further progress of the disease and preventing pneumonia.

Treatment of Wounds by Paraffin.—

Pratt (British Medical Journal) says that no other treatment in which the constitutional symptoms so quickly disappear, in which the pain so rapidly subsides, and in which healing is so uninterrupted, as in wounds and burns treated by soft paraffin.

The wound or burn is first thoroughly cleansed with sterilized water; the paraffin is then melted and either sprayed by special spray or painted by a sterilized brush over the affected area. One layer of gauze is then placed over the injured part, and then another layer of melted paraffin is either sprayed or painted over the gauze. On the top of this a cotton-wool pad is placed, and then the part is bandaged. The dressing is left undisturbed for twenty-four hours, when it is removed and a fresh application

made. A third dressing is applied in ordinary cases the next day, and, when necessary, a fourth dressing two days after.

For Reconstructive Purposes.

For the purpose of adding strength to tissues reduced through a long illness, such as influenza, pneumonia or typhoid fever, Hagee's Cord. Ext. Ol. Morrhuae Comp. is of the highest value. The usefulness of Cord. Ext. Ol. Morrhuae Comp. (Hagee) lies in its definite power to stimulate the appetite, increase the richness of the bloodstream, add increased resistance to the tissues, and in its palatability, as a result of which it may be given for long periods without causing gastric distress or becoming intolerable to the patient.

In considering the value of Cord. Ext. Ol. Morrhuae Comp. (Hagee) as a reconstructive agent it should be remembered that it is a cod liver oil product and contains the essential nutritive and strengthening properties of the plain oil without giving rise to the disagreeable effects of the plain oil. In administering Cord. Ext. Ol. Morrhuae Comp. (Hagee) the clinician may rest assured that he is offering his patient all of the beneficial properties of cod liver oil and sparing him the obnoxious qualities. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that the plain oil is except disagreeable.

Adventure Number Two—Doctor Young Doctor.

—A short time after arriving, Young Doctor was called in to see a case which presented the features that we are accustomed to associate with appendicitis. There were pain first general and later localized to the right groin, nausea and vomiting, fever and the white count showed about 10,000 leucocytes. It looked like a clear case to Young Doctor but he was unwilling to assume responsibility. He called in Friend Consultant. Consultant could not come at the moment but would be free in about an hour. That suited young doctor very well for he had a call down the valley to attend to. He told Consultant then to come along when he could and that though he was sure of the diagnosis and thought that he ought to remove the appendix at once, he said no harm in waiting an hour or so. Young Doctor made his call and on returning he went first to the house of his patient. There he was told that the girl had been taken to the hospital. He thought that he was really being treated

better than he deserved. Here was an older man taking as much interest in his case as he took himself. It was mighty nice of Consultant, thought young Doctor, to go to all that trouble just to help him out. He arrived at the hospital and bustled in, enjoying in anticipation his first appendectomy for a fee, he asked for his patient and was told that she was doing nicely, thank you. Yes, Consultant had made the most of his opportunity and Patient was now coming out from under the anaesthetic.—Southern Medicine.

Bladder Injury in Warfare.—Fullerton (British Journal of Surgery) concludes with regard to bladder injury in warfare as follows: 1. Injuries of the bladder form a very small proportion of the total wounds reaching the base hospitals. 2. Their importance from the point of view of prognosis and treatment depends to a large extent upon associated injuries. 3. The more usual associated injuries are those of the bones of the pelvic girdle and of other pelvic viscera. The most frequent viscus found injured in cases reaching the base is the rectum. Injuries of the pelvic colon and small intestine are comparatively rare in cases seen at the base. 4. The importance of the perivesical connective tissue cannot be overestimated. Pelvic cellulitis is a frequent complication. 5. The mortality of bladder injuries is very high. In cases reaching the base it may be estimated at 30 per cent. The chief causes of death have been pelvic cellulitis, peritonitis, and sepsis. 6. The chief sequelae, judged from the reports reaching from England up to the present, are necrosis of bone, persistence of cystitis, calculus, and stricture at the neck of the bladder. Sufficient data are not at present available to enable us to judge of the frequency of extension of infection to the kidney. J. Tanton mentions that in a series of 137 cases of wounds of the bladder collected by him, 10 cases of pyelonephritis occurred in 3 of which calculi formed requiring nephrolithotomy. 7. The treatment should be conducted on common sense lines. Accumulations of infected fluid, blood-clot, and fecal matter in the pelvic connective tissue must, if possible, be prevented by attention to the original wounds. If this is unsuccessful, suitably planned incisions should be made. The fact that urine flows over the surface of a wound is not necessarily in itself an indication for suprapubic cystotomy. If the bladder can be kept clean by irrigation, aseptic urine

from the bladder does not appear to have a deleterious effect on the wound. 8. Suprapubic cystotomy will drain an infected bladder but will not prevent pelvic cellulitis and sepsis from occurring in the perivesical connective tissue and parietes, respectively. The after-treatment of the bladder by frequent irrigation is necessary to get rid of cystitis and prevent calculus formation.

The Eugenic Marriage.—The new Norwegian law came into force on January 1st, 1919. It may not represent the unadulterated eugenic ideal, but it is so great a step towards it as to be almost revolutionary. It contains eighty-one sections, but the following are some of the salient points: A man under 20 and a woman under 18 may not marry without the consent of the authorities. Birth and baptism certificates must be produced before the banns are published. Under certain conditions, one or both of the contracting parties may be required to show that they have not been insane. Both must declare in writing that they are not suffering from epilepsy, leprosy, syphilis or other venereal disease in an infectious form. In the other alternative the subject of any of these diseases must prove that the other party to the marriage contract is cognizant of the fact, and that both parties have been instructed by a doctor as to the dangers of the disease in question. The doctor concerned is not to be tied by professional secrecy and is bound to interfere if he knows that any one of these diseases is being concealed by either side. A written declaration must also be given by the candidates for marriage as to previous marriages and to children born to them out of wedlock. The marriage may be nullified if it is subsequently proved that insanity or any of the above diseases have been concealed, or if an incurable morbid condition, incompatible with married life, exists. Dissolution of the marriage may also be claimed if false declarations have been made or concealed. Again, if the woman has become pregnant by another man, or if the man has rendered another woman pregnant and this has not been revealed, dissolution of the marriage may be claimed, whether the child of this irregular union be born before or after the marriage; such a claim must be made within six months of the facts becoming known to the claimant. No woman may marry again till ten months after the termination of her previous marriage if she

is pregnant at this period. Many other causes are defined as valid for the dissolution of marriage, and it is evident that henceforth in Norway it will often be difficult to marry in haste, and that the facilities for escaping from a hasty, ill-judged marriage will prove to be numerous and varied.—British Medical Journal.

Remarks on Chest Wounds.—Nixon (British Medical Journal) says that the general considerations from the surgeon's point of view of chest wounds are, first to save life; second, to restore function as completely and as quickly as possible. All wounds of the parietes and thoracic contents should receive the surgical attention they require at the earliest possible moment. Hemorrhage must be arrested and every possible step taken to avoid infection. No fluid, whether blood serum or pus, must be allowed to collect in the chest. Early and frequent aspiration must be resorted to whether thoracotomy has been performed or not. Any fluid in the chest is dangerous from two points of view: (a) It is a nidus for sepsis. (b) It interferes with the expansion not only of the injured but also of the uninjured lung, setting up conditions favorable to the development and spread of bronchitis, broncho-pneumonia and lobar pneumonia. Foreign bodies, clothing and bone should be removed whenever possible. They are dangerous not only from the point of view of immediate sepsis, but from that of subsequent interstitial fibrosis. Resection and open drainage, as formerly practiced for empyema, is an unsatisfactory operation, and is shown by experience to be rarely necessary if the early treatment according to modern methods is not neglected.

Treatment of Sarcoma of the Prostate.—Newman (British Medical Journal) states that beyond the good effect by palliative measures to lessen the pain of retention, little can be done in the way of treatment. A number of radical operations have been suggested and practised, but the results have not been encouraging. Sarcoma being an infiltrating tumor, by the time it comes under the eye of the surgeon, no cure can be looked for from any operation which is not radical. Consequently total extirpation of the bladder has been advocated, and has been performed in a considerable number of cases, but out of 69 operations there have been only three instances of permanent

cure. The cases in which a radical operation is indicated are very few: 1. The patient must have good general health. 2. In the prostate the tumor must be still encapsulated; in the bladder it must be limited in extent; and there must be no evidence of metastatic deposits in glands or other organs. 3. There must be no ureteral obstruction, and the renal functions must be active and healthy. In sarcoma of the prostate, so long as the tumor remains encapsulated, complete extirpation through the perineum may be possible. In sarcoma of the bladder, as in primary growths in the prostate, as soon as the diagnosis is made the question arises: Is it advisable to remove the tumor? Many surgeons argue that in view of the fact that the disease rapidly leads to a fatal issue when operative aid is withheld, together with the agony endured from retention, a suprapubic drain should certainly be established for the sake of the immediate relief given, and that if the indications are favorable, complete excision of the tumor or even cystectomy may be considered. In view of the very unfavorable results obtained up to the present time, Newman thinks that the latter operation cannot be recommended.

Modern Day Demands.

The demands of the present day doctor are for palatability as well as a therapeutic

potency of the various agents brought to his notice.

This demand he now makes of cod liver oil, for he realizes that a drug may be ever so potent but if it is not palatable a great part of its value is lost, for it cannot be given over long periods or to patients with delicate stomachs.

It was in meeting these demands that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) gained its great popularity with the medical profession. In its manufacture the essential elements of the crude cod liver oil have been preserved and thus the patient gets the full benefit of the therapeutic properties of the oil without its objectionable qualities. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) being a palatable product may be continued over long periods without giving rise to gastric distress. By the same token it is thoroughly acceptable to the most fastidious stomachs.

Tachycardia and Intermittent Heart.—

In tachycardia whether proceeding from exophthalmic goiter or from other causes, or in intermittent heart arising from the excessive use of tea, coffee, or alcohol, Cactina Pillets will be found of exceptional value. They afford a safe and reliable means of overcoming excitability and irregularity of the heart's action. One or two Pillets every two or three hours will exert the desired effect by improving the nutrition and tone of the cardiac muscle.

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No. 6

CIVIL SURGERY AS DONE IN AN ARMY HOSPITAL.

By Addison Brenizer, M. D., Charlotte, N. C.;
Formerly Lieut. Col. M. C. U. S. A., Chief
Surgeon Base Hospital No. 6, A. E. F.,
March-February, 1918-1919.

During the most active period of my service in the army abroad, between March and December, 1918, a period of nine months, and a period during which, for the most of the time, we were almost overwhelmed with battle casualties, we, my associates and I, performed eleven hundred and ten operations for surgical conditions of a civil type, in no way dependent upon battle.

This series of 1,110 operations is interesting from several view points:

The operations were performed in an army hospital.

They were performed, parallel with a rush of war surgery.

They were performed by men from various parts of our country.

They were performed on a picked body of men.

The surgical staff was never constant: the surgeons were transferred in out of the hospital for other duties. And there were frequent changes in the operating room personnel.

More than half of these operations were done by three surgeons and the large majority of them were done by eight surgeons.

The operations in detail were as follows:

Operation:	Diagnosis:	
Ablation of exostoses	Exostosis condyle of femur	3
Ablation of toe nails	Hyperkeratosis digitorum	2
Adenectomy	Adenoids	11
Advancement of rectus muscle	Strabismus	1
Apicectomy	Apical Sepsis	3
Appendectomy	Acute and subacute appendicitis	90
Appendectomy	Chronic appendicitis	48
Aspiration and lavage of knee	Arthritis gonorrhoea sup.	7
Bone grafting (sliding)	Ununited fractures	4
Capsular plastic of knee	Dislocation of patella	2
Circumcision	Pihmosis and redundant foreskin	29
Cholecystostomy	Cholecystitis and gall stones	2
Cholecystectomy	Hydrops of gall bladder	1
Conversion to chryptorchidia abd.	Undescended testicle	4
Curettement of ethmoids	Frontal sinusitis	34
Curettement of uterus	Incomplete abortion	1
Enucleation of eye ball	Rupture of ball	1
Epididymotomy	Epididymitis gonorr.	27
Ethmoidectomy	Ethmoiditis and sinusitis	11
Excision of cervical tumors	Cysts	3
Excision of cervical tumors	Glands	2
Excision of cervical tumors	Lymphadeno-fibroma	1
Excision of cervical tumors	Tuberculous glands	4
Excision of tumor of eye brow	Lipoma	1
Excision or incision of fistula	Fistula in ano	11
Excision of flap and plastic	Ingrowing toe nail	8
Excision of ganglia	Popliteal space and wrist	3
Excision of inguinal glands	Lymphadenitis nonvenereal	16
Excision of lacrymal sac	Dachryocystitis	4
Excision of tumor of back and thigh ..	Lipomata	2
Excision of tumor of lip	Epithelioma	1
Excision of cyst or sinus	Pilonidal cyst or sinus	7
Excision or incision of bursal sac	Prepatellar bursitis	5
Excision of specimen	Blastomycosis	1
Excision of veins	Varicose veins	14
Excision of veins	Varicocele	34

Eversion of sac (Wyllis Andrews)	Hydrocele	10
Gastroenterostomy	Duodenal and gastric ulcer	16
Herniorrhpy (Ferguson)	Indirect Inguinal Hernia	184
Herniorrhpy (Bassini)	Direct inguinal hernia	6
Herniorrhpy (femoral route)	Femoral hernia	1
Herniorrhpy (inguinal route)	Femoral hernia	2
Herniorrhpy (Mayo)	Epigastric hernia	3
Herniorrhpy (Ventral)	Repair of abd. wall, scars	16
Hemorrhoidectomy	Ext. and int. hemorrhoids	117
Incision and drainage of abscess	Face	2
Incision and drainage of abscess	Neck	10
Incision and drainage of abscess	Parotid gland	2
Incision and drainage of abscess	Axilla	2
Incision and drainage of abscess	Chest wall	1
Incision and drainage of abscess	Sternum (T. B., curetted)	1
Incision and drainage of abscess	Back	2
Incision and drainage of abscess	Perinephritic	1
Incision and drainage of abscess	Abdominal wall	1
Incision and drainage of abscess	Inguinal glands (bubo)	5
Incision and drainage of abscess	Prostate	1
Incision and drainage of abscess	Ischio-rectal	13
Incision and drainage of abscess	Peri-urethral	4
Incision and drainage of abscess	Bartholines' glands	3
Incision and drainage of abscess	Thigh	2
Incision and drainage of abscess	Cellulitis (phlegmon)	10
Incision and curettage	Chalazion	1
Incision and drainage	Subdeltoïd bursitis sup.	2
Iridectomy	Iritic adhesions	1
Laparotomy, liberation of adhesions	Intestinal obstruction	4
Laparotomy, intestinal closure	Perforation of intestine	3
Laparotomy, intestinal closure	Rupture of small intestine	1
Laparotomy, closure of stomach, gastro- enterostomy	Perforated ulcer	1
Laparotomy	Tuberculous peritonitis	1
Laminectomy	Fracture of cervical vertebra	1
Laminectomy, exploratory	Gumma and pressure	1
Mastoidectomy, simple and radical	Mastoiditis	52
Naso-frontal duct enlargement	Frontol sinusitis	4
Orchidectomy	Tuberculous epididymitis	1
Orchidectomy	Undescended testicle, hernia	2
Plastic on ear	Epithelioma of ear	1
Radical antrotomy	Maxillary sinusitis	3
Redressment of fracture	Hemerus	1
Redressment of fracture	Radius	2
Redressment of fracture	Tibia	1
Redressment of fracture	Clavicle	1
Redressment of fracture	Patella	1
Removal of nasal polypsi	Asthma	1
Repair and reconstruction	Urinary fistula	4
Resection of interphalangeal joint	Hammer toe	1
Salpingectomy	Pus tubes	1
Salpingectomy	Tubal pregnancy	1
Skin grafting	Ulcus femoris	3
Skin grafting	Frost bitten feet	2
Suspension of uterus	Prolapsus uteri	1
Thoractomy	Empyema	57
Thoractomy	Contusion and rupture of chest	1
Thoracotomy, liberation of diaphragm	Eventration of diaphragm	1
Tonsillectomy	Tonsillitis, Hypertrophy	102
Transplantation	Pterygium	7
Transfusion of blood	Pernicious anemia	1
Trephining skull, ventricular puncture	Meningitis, infected ventricles	2

Trephining skull, drainage	Subdural abscess	3
Trephining skull, drainage	Abscess of brain	1
Trephining skull, decompression	Fracture of base, hemorrhage	1
Thyroidectomy	Simple and exoph. goiter	14
Turbinectomy	Frontal sinusitis	5
Turbinectomy	Optic neuritis	2
Urethrotomy, internal or external	Stricture	9
Total		1,110

These operations were performed by the following surgeons in numbers opposite their names:

Brenizer, A. G., Charlotte, N. C.	317
Tobey, H. G., Boston, Mass.	212
Hodgson, J. S., Boston, Mass.	155
Ghoreyeb, A. W., Boston, Mass.	69
O'Neil, R. F., Boston, Mass.	62
Marble, H. C.	56
Turner, H. G., Raleigh, N. C.	56
Crawford, R. H., Rock Hill, S. C.	31
Allen, C. I., Wadesboro, N. C.	31
Moeller, F. W., Chicago, Ill.	23
Reese, J. W., Cleveland, O.	22
Clark, D. S., Boston, Mass.	17
Hatch, R. A., Boston, Mass.	15
Darling, F. E., Milwaukee, Wis.	12
Hammer, L. A., Des Moines, Iowa	11
Vincent, Beth, Boston, Mass.	8
Lippold, Paul, Detroit, Mich.	3
Matheson, J. P., Charlotte, N. C.	2
Tangerman	2
Miller, A. L., Washington, D. C.	1
Blair, V. P., St. Louis, Mo.	1
Mixter, Jason, Boston, Mass.	1
Howard	1
Total	1,110

The separate operations were performed by the various surgeons as follows:

Ablation of exostoses: Brenizer (2), Ghoreyeb (1).
Ablation of toe nails: Brenizer (1), Hodgson (1).
Adenectomy: Tobey (11).
Advancement of rectus muscle: Hatch (1).
Apicectomy: Sherman (2), Gullifer (1).
Appendectomy, acute and subacute: Brenizer (42), Hodgson (14), Turner (10), Ghoreyeb (7), Crawford (4), Marble (4), Allen (3), Moeller (3), Vincent (2), Clark (1).
Appendectomy, chronic: Hodgson (13), Brenizer (12), Turner (4), Marble (4), Ghoreyeb (4), Clark (2), Allen (2), Reese (2), Moeller (2), Darling (1), Hammer (1).
Asperation and lavage of knee joint: Brenizer (7).

Bone grafting: Brenizer (4).
Capsular plastics for dislocated patella: Brenizer (1), Hodgson (1).
Circumcision: O'Neill (13), Darling (3), Brenizer (2), Crawford (3), Hodgson (2), Lippold (1), Ghoreyeb (1), Turner (1), Marble (1), Moeller (1), Reese (1).
Cholecystostomy: Brenizer (2), Turner (1).
Cholecystectomy: Brenizer (1).
Conversion to cryptorchidia abdominalis (undescended testicle): Brenizer (4).
Curettement of uterus: Brenizer (1).
Curettement of ethmoids: Tobey (3).
Enucleation of eye ball: Hatch (1).
Epididymotomy: O'Neil (27).
Ethmoidectomy: Tobey (11).
Excision of cervical cysts: Hodgson (2), Clark (1).
Excision of cervical glands: Brenizer (1), Turner (1).
Excision of cervical lymphadeno-fibroma: Brenizer (1).
Excision of cervical tuberculous glands: Brenizer (2), Turner (1), Hodgson (1).
Excision of lipoma of eye brow: Hodgson (1).
Excision of lipoma of back and thigh: Hodgson (1), Marble (1).
Excision or incision of fistula in ano: Hodgson (2), Crawford (2), Turner (2), Brenizer (1), O'Neil (1), Ghoreyeb (1), Moeller (1), Darling (1).
Excision of flap of toe and plastic: Hodgson (3), Brenizer (1), Clark (1), Hammer (1), Turner (1), Reese (1).
Excision of ganglia: Brenizer (2), Ghoreyeb (1), Reese (1).
Excision of inguinal glands: Hodgson (8), Brenizer (4), O'Neil (2), Allen (1), Ghoreyeb (1).
Excision of lacrymal sac: Hatch (4).
Excision of epithelioma of lip: Ghoreyeb (1).
Excision of pilonidal cyst or sinus: Hodgson (3), Brenizer (1), Marble (1), Moeller (1), Turner (1).
Excision or incision of prepatellar bursa: Hodgson (3), Brenizer (1), Allen (1).

- Excision of specimen-Blastomycosis: Matheson (1).
Hodgson (1).
- Excision of varicose veins: Ghoreyeb (5), Brenizer (3), Hodgson (2), Turner (2), Marble (1), Moeller (1).
- Excision of varicocele: Brenizer (19), Hodgson (4), Marble (4), Moeller (2), Ghoreyeb (2), Allen (1), Clark (1), Turner (1).
- Eversion of hydrocele sac: Brenizer (3), O'Neil (2), Turner (2), Ghoreyeb (2), Hodgson (1).
- Gastroenterostomy: Brenizer (15), Mixer (1).
- Herniorrhaphy (Ferguson): Brenizer (40), Hodgson (41), Ghoreyeb (22), Allen (17), Marble (14), Turner (11), Crawford (10), Reese (8), Moeller (7), Hammer (4), Clark (3), Darling (3), O'Neil (3), Lippold (1).
- Herniorrhaphy (Bassini): Brenizer (3), Hodgson (2), Allen (1).
- Herniorrhaphy femoral (femoral route): Marble (1).
- Herniorrhaphy femoral (inguinal route): Brenizer (2).
- Herniorrhaphy epigastric (Mayo): Brenizer (1), Hodgson (1), Turner (1).
- Herniorrhaphy ventral (repair): Brenizer (13), Hodgson (1), Marble (1), Moeller (1).
- Hemorrhoidectomy: Brenizer (29), Hodgson (24), Ghoreyeb (13), Crawford (22), Turner (11), Marble (10), Reese (8), Darling (4), Moeller (2), Clark (1), Lippold (1), Allen (1), Hammer (1).
- Incision and drainage of abscess: Face: Hodgson (1), Ghoreyeb (1). Neck: Brenizer (3), Hodgson (3), Clark (2), Marble (1), Turner (1). Parotid gland: Blair (1), Miller (1). Axilla: Hodgson (1), Marble (1). Chest wall: Turner (1). Sternum: Brenizer (1). Back: Brenizer (1), Turner (1). Perinephritic: Clark (1). Abdominal wall: Brenizer (1), Allen (1).
- Inguinal (bubo): Hammer (2), Brenizer (1), O'Neil (1), Turner (1).
- Prostate: O'Neil (1).
- Ischio-rectal: Brenizer (3), Vincent (2), Marble (1), Allen (1), Turner (1), Hammer (1), Hodgson (1), Howard (1), Clark (1), Reese (1).
- Periurethral: O'Neil (4).
- Bartolline's gland: Brenizer (3).
- Thigh: Crawford (1).
- Cellulitis: Hodgson (4), Ghoreyeb (4), Brenizer (2).
- Subdeltoid bursitis: Brenizer (2).
- Incision and curettage of chalazion: Matheson (1).
Iridectomy: Hatch (1).
Laparotomy (intestinal obstruction): Brenizer (3), Hodgson (1).
Laparotomy (perforation): Brenizer (2), Hodgson (1).
Laparotomy (ruptured intestine): Brenizer (1).
Laparotomy (gastroenterostomy: Brenizer (1).
Laparotomy (tuberculous peritonitis): Hodgson (1).
Laminectomy (cervical fracture): Brenizer (1).
Laminectomy (gumma, pressure): Brenizer (1).
Mastoidectomy simple and radical: Tobey (49), Tangerman (2), Marble (1).
Naso-frontal duct enlargement: Tobey (4).
Orchidectomy (tuberculous): O'Neil (1).
Orchidectomy (undescended testicle): Ghoreyeb (1), Moeller (1).
Plastic on ear (epithelioma): Brenizer (1).
Radical antrotomy: Tobey (3).
Redressment of fracture: Humerus: Turner (1). Radius: Brenizer (1), Marble (1). Tibia: Brenizer (1). Clavicle: Brenizer (1). Patella: Marble (1). Removal of nasal polypi: Tobey (1). Repair of urinary fistula: O'Neil (2), Brenizer (1), Hammer (1). Resection of interphalangeal joint: Hodgson (1). Salpingectomy: Brenizer (2). Skin grafting: Hodgson (3), Brenizer (2), Allen (1). Suspension of uterus: Brenizer (1). Thoractomy: Brenizer (37), Hodgson (6), Clark (3), Vincent (3), Ghoreyeb (2), Marble (2), Allen (1), Hammer (1), Moeller (1). Thoracotomy, repair of chest: Brenizer (1). Thoracotomy, repair of diaphragm: (1). Tonsillectomy: Tobey (96), Marble (5), Matheson (1). Transplantation of pterygium: Hatch (7). Transfusion of blood: Vincent (1). Trephining skull, ventricular puncture: Brenizer (1), Mixer (1). Trephining skull, drainage: Tobey (2), Brenizer (1). Trephining skull, drainage: Brenizer (1). Trephining skull, decompression:

Hodgson (1).

Thyroidectomy: Brenizer (14).

Thyroidotomy (abscess): Brenizer (1).

Turbinectomy: Tobey (1).

Urethrotomy: O'Neil (6), Brenizer (3).

Total, 1,110.

Deaths 23.

Mortality 2 per cent.

Deaths defined:

Thoractomy for empyema 12.

All thoracotomies were done with local anesthesia. They were done early. The autopsy reports showed death from multiple serous membrane involvement: other pleural sac, pericardium, peritoneum and general septicemia.

Laparotomy for intestinal obstruction.....4

Laparotomy for intestinal perforation.....3

Laminectomy for fracture of cervical vert. 1

Ventricular puncture, meningitis 2

Trephine for subdural abscess, septimia 1

All the above cases were well nigh hopeless except perhaps the empyemas. They were likely operated on too early. Had we waited, the deaths, at least would not have been credited the surgical service.

Remarks:

Seven cases of purulent gonorrhoeal arthritis of the knee joint were punctured with a large trochar, washed out several times with boiling hot salt solution, banded to a splint for two days and then made to use and walk on the leg. Six of these cases gained almost perfectly functioning joints within three weeks and the seventh case was transferred out of the hospital before completion of treatment.

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Six cases of undescended testicle, complicated by inguinal hernia. In one case the testicle was removed on account of torsion and cut off blood supply to the testicle. In another case the testicle was removed because the cord was too short to reach down beyond the external abdominal ring. In four cases the testicle was slipped through a slit in the hernia sac, the sac ligated above as for a hernia and the sac below everted around the testicle as for Wyllis Andrews' operation for hydrocele. The peritoneum was pushed back, the testicle placed in a pocket between peritoneum and lower abdominal wall and there caught by stitches through the tunica vaginalis to the muscle, thus converting the testicle again into a cryptorchidia abdominalis or rather

to a subperitoneal position. After this the inguinal region was repaired as for hernia.

The army life and diet, the sea voyage aided in bringing to light or causing an exacerbation of duodenal and gastric ulcer. Out of sixteen cases operated on, the ulcer was found in all cases except one. All cases returned to duty within two months.

There were sixteen cases of what we chose to call "lymphadenitis non-venereal." These glands would appear in the inguinal region, would conglomerate into a hard mass and finally break down in pus. There was a tendency for the femoral glands and iliac glands to become involved, if they were not early removed. The glands, first appearing, on section showed numerous pin head abscesses and the section under the microscope looked like an ordinary lymphadenitis acuta. Smears and cultures from these glands gave no growth.

There were fourteen operated cases of goiter, eight exophthalmic, six colloid and cystic and one abscess of the right lobe. We were careful to separate the so-called cases of shell shock, with a fast pulse and even considerable struma.

609 N. College St.

For the purpose of adding strength to tissues reduced through a long illness, such as influenza, pneumonia or typhoid fever, Hagee's Cord. Ext. Ol. Morrhuac Comp. is of the highest value. The usefulness of Cord. Ext. Ol. Morrhuac Comp. (Hagee) lies in its definite power to stimulate the appetite, increase the richness of the bloodstream, add increased resistance to the tissues, and in its palatability, as a result of which it may be given for long periods without causing gastric distress or becoming intolerable to the patient.

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TREATMENT OF PERNICIOUS ANEMIA.*

By Leon K. Baldauf, Louisville, Ky.

The object of this communication is to emphasize important findings based on recent chemical studies of pernicious anemia and allied cases, and to advance methods of procedure and treatment which these studies would indicate, a treatment which has already given the writer successful results. It is concerned with the patient when the metabolism is below normal, when transfusion offers very little, when splenectomy is contraindicated; with a time when methods of treatment previously used have resulted frequently in failure. It includes the period when the anemia is intense, the cell count being a million or less, the temperature comparatively high, anorexia marked, and the gastro-intestinal symptoms severe. By the application of the method as suggested, it is believed this critical period may be more often passed, and with this accomplished, the previous methods, (transfusion, etc.), successful in only a limited number of cases before, may now be adopted and their usefulness extended to a larger number of cases.

It is understood that the **type** of anemia under discussion is a **primary idiopathic anemia**, and necessarily with no known etiology. With the discovery of its cause, any supposed primary anemia reverts to a secondary type. Many theories have been advanced to explain the various symptoms of this peculiar anemia, but all methods of treatment closely follow the theory of Grawitz, that pernicious anemia is due to an intoxication from the digestive tract.

The position of Addison that "pernicious anemia is a general anemia occurring without any discoverable cause whatever; cases in which there has been no previous loss of blood, no existing diarrhoea, no chlorosis, no purpura, no renal, splenic, glandular, sturpous or malignant disease" continues to be ours today.

We shall first review the recent methods of treatment following with a review of: 1—Recent studies on the effect of blood transfusion on basal metabolism. 2—The Kahn-Barsky chemical studies in pernicious anemia. 3—Effect of diet on liver repair as applied to the liver lesion of pernicious anemia. 4—Effect of the

disease on chlorid excretion and, 5—Summary of conclusions derived from these several studies. With these conclusions as a basis we propose a new method of treatment which in the cases to which it was applied by the writer shows an improvement over previous methods though an absolute cure probably cannot be effected nor expected until the cause of this disease is determined.

Recent Methods of Treatment.

As a preliminary step, it will be well to review briefly the more recent methods of treatment, first as a means of comparison and second to emphasize the present unsatisfactory results:

First, on account of the atrophy of the gastric and intestinal glands, various extracts of these glands have been given with the hope of increasing the excretory substances lacking in the gastric and intestinal fluids.

Second, arsenic in all of its various forms has been administered by mouth, sub-cutaneously and intravenously, varying from small doses to relatively large doses. Arsenic, Fowler's Solution, arsenic waters, Atoxyl, sodium cacodylate.

Third, glycerin has been given because of the supposed toxic action of oleic acid on the intestinal tract.

Fourth, bone marrow from beef and veal bones, freshly spread on bread, or compressed into tablets has been given.

Fifth, salt and carbonated baths have been advocated.

Sixth, transfusion and infusion. The four methods commonly employed are the direct intravenous blood transfusion; the indirect intravenous blood transfusion; the intravenous infusion of salt solution, and the sub-cutaneous injection of salt solution.

In the direct intravenous blood transfusion the syringe method may be used, or the Crile technique or its modification. In the indirect transfusion, defibrinated blood or blood decalcified with sodium citrate. Orther says he has found no evidence to show the curative value of blood transfusion in this disease. There is too much attendant discomfort, pain, anxiety and risk to warrant its employment in a definitely proved case of pernicious anemia.

My experience has been the same in the few cases in which I have seen it tried.

Seventh—Splenectomy. A number of satisfactory reports have been made, others unsatisfactory, but as Osler emphasizes, it is impossible with the small

*Read before the Henderson County Medical Society, Henderson, Ky., November 10, 1919.

amount of material at hand to arrive at any definite conclusion.

Effect of Transfusion on Basal Metabolism.

In a study of the basal metabolism in anemia with special reference to the effect of blood transfusion on the metabolism in pernicious anemia, (1) Tompkins, Brittingham and Drinker, summarize their findings as follows:

1. Transfusion in cases of anemia produced the following results:

- (a) A diminution of metabolism.
- (b) A diminution of pulse and respiratory activity.
- (c) A drop in temperature, if it had previously been elevated.
- (d) A rise in percentage of haemoglobin, and in the simple blood count.

2. The response of the metabolism to transfusion lags behind that of all the other factors by an interval of several days.

3. The lowering of metabolism is therefore not due simply to a cessation of the compensatory muscular activity of the anemic individual.

4. Before treatment the metabolism may be within normal limits or it may be above or below normal.

5. After transfusion, the metabolism always reaches a normal or diminished level.

These facts suggest that the metabolism of the anemic is dependent on two contending factors, outside of any effects from compensatory muscular activity.

1. In untreated acute cases, there is evidently some type of stimulation to the body cells in general and the amount of this stimulation is represented by the fall in metabolism after transfusion.

2. There are coincident progressive tissue alternations which tend to reduce metabolism.

These alterations are represented by the diminished metabolism of the chronic cases and by low level to which the metabolism falls in practically all cases as a result of transfusion. These facts are of considerable importance in view of the unsatisfactory results in many cases following blood transfusion.

Results of Kahn Barsky Chemical Studies

(2) Kahn and Barsky—in a careful and intensive study of three cases of pernicious anemia came to the following conclusions:

1. The blood analysis shows a lessened specific gravity of the serum, reduction of the protein content, an increase in the ash and lime content and a normal fat,

cholesterol, and glucose percentage.

2. Intestinal putrefaction, as evidenced by increased ethereal sulphate output, is present. There is a state of suboxidation, the neutral sulphur fraction is increased.

3. The renal function is normal as evidenced by the phenolsulphonphthalein test and the blood nitrogen partition.

4. The creatinin in the blood is increased.

5. Acidosis was present in the cases examined as determined by the carbon dioxide combining power of the blood plasma, H ion concentration of the blood, and the carbon dioxide of the alveolar air.

Effects of Diet on Liver Repair.

With a view to emphasizing the effect of diet on the liver repair the following papers (three) are reviewed. Pernicious anemia presents a liver lesion comparable to phosphorus and chloroform poisoning livers and with results like the following in these lesions it was natural to expect the same in the pernicious anemia cases.

In his experimental study of the protective action of carbohydrate diet in his phosphorus and chloroform poisoned animals, (3) Simonds concludes that "the feeding of sugar to phosphorus poisoned animals conserves and replenishes the hepatic glycogen and markedly diminishes the toxic effect of the phosphorus as shown by the mildness of the clinical symptoms, by the continued presence of glycogen in the liver and by the moderate degree of degenerative changes in that organ."

The available data in the literature on the chemical, enzymatic and metabolic changes in chloroform poisoning, acute yellow atrophy and eclampsia are not so complete as for phosphorus poisoning, but from the facts at hand, there is reason to believe that the differences are more quantitative, than qualitative, and that the administration of sugar in these three conditions will have something of the same protective effect as in phosphorus poisoning."

(4) "A diet of bread and skimmed milk gives the optimum repair following a unit of chloroform liver necrosis. A similar reaction is to be expected with any mixed diet rich in carbohydrate. A liver necrosis involving the central or half of every lobule, (50 per cent of all liver parenchyma) will usually be completely repaired in from seven to nine days.

A diet of cooked skeletal muscle is not as favorable for rapid liver repair as the

rich carbohydrate diet. A diet of cooked liver or kidney is more favorable for rapid liver repair than a meat diet. This diet of parenchymatous organ tissue approximates the rich carbohydrate diet in efficiency of liver repair. Beef extract alone does not favor liver repair, which indicates that meat extractives are not particularly concerned in the reaction of liver repair.

Brain feeding is favorable to liver regeneration and repair. This diet approximates lean meat feeding in its favorable influence on liver repair. In this respect the brain diet stands in marked contrast to the fat diets.

Fat diets (vegetable oils, butter, lard, beef fat, etc.), do not aid in liver regeneration. The same repair is to be observed during fasting control periods. The fat diet can spare the proteids of the animal at the source, but cannot act in conservation of proteid material by taking an active part in reconstruction of new proteid substance."

(5) "The curve of urinary nitrogen excretion of a dog makes a sudden rise after chloroform injury. The actual amount of nitrogen eliminated following injury is greater in a fasting than in a sugar fed animal. Furthermore, the curve of excretion remains well above the starvation metabolism base line if fasting is continued after chloroform anaesthesia. If sugar is given, the curve immediately falls even below the pre-anaesthetic base line. Liver repair is much more rapid and complete on a sugar or high carbohydrate diet than it is on starvation. In fact an injury of one-half of each liver lobule may be completely repaired in nine days on a sugar diet, but only 50 per cent repaired under fasting conditions."

After the subsidence of the severe symptoms, with the loss of temperature and the beginning of an appetite, pernicious anemia takes on more the nature of a simple anemia. The beneficial results of feeding proteids to animals with simple anemia influenced us in modifying our diet at this stage of the disease.

According to (6) Hooper and Whipple, the curve of bile pigment secretion can be depressed below normal by a meat diet and can be raised much above normal by a diet rich in carbohydrate. Quoting them, "at the present time we have every good evidence that blood regeneration after simple anemia of definite grade can also be influenced at will by various dietary factors. The curve of blood regeneration on a meat diet is very rapid; a mat-

ter of days or few weeks. While the curve of regeneration on a diet rich in carbohydrate is very slow. In some of the animals on a diet of bread and milk, it has required months to complete blood regeneration.

Splenectomized dogs reacted on this diet as rapidly as the normal animal. Iron in the form of Blaud's Pills administered daily during the anemia had no appreciable effect on the curve of blood regeneration in any of our experiences."

Effect on Chlorid Excretion.

The observation of Christian on renal functions in pernicious anemia, in which he found a disturbance in chlorid excretion, suggested to (?) Steinfield the study of the plasma and urinary chlorides in experimentally induced anemia in dogs. His conclusions were as follows:

1. The chloride concentration in the plasma is raised in the dog during active stage or infection with the trypanosoma equiperdum at the period when anemia is a prominent feature.

2. This increased concentration of chlorides in the plasma is dependent on retention and due to impaired capacity of the kidneys to excrete chlorides.

Conclusions Derived From Recent Chemical Studies.

The essential facts gleaned from these summaries of recent chemical studies are the following:

1. That in pernicious anemia, we have an acidosis as determined by the carbon dioxide combining power of the blood plasma, the H ion concentration of the blood and the carbon dioxide of the alveolar air.

2. There is an increase in the ash and lime content of the serum. It is impossible to state whether this acidosis and increase in lime salts is the result of loss of appetite and is comparable to the acidosis and increased excretion of lime salts noted in cases of starvation or whether it is the direct result of the disease.

3. The chloride concentration in the plasma is increased in anemias produced experimentally and this retention is not due to impaired capacity of the kidneys to excrete chlorides.

4. That liver repair of chloroform and phosphorus poisoning cases, (and we have a markedly fatty infiltration liver in pernicious anemia comparable but not identical with the livers of chloroform and phosphorus liver), occurs much more rapidly on a carbohydrate than on a fat or proteid diet

5. That transfusion produces a dim-

inution in metabolism and the response of metabolism to transfusion lags behind that of all factors by an interval of several days.

6. That blood regeneration following simple anemia is more rapid on a meat diet.

Proposed New Method of Treatment Based on Above Conclusions.

Bearing these conclusions in mind, during the critical period of severe anemia, when the count is a million or less, when the temperature ranges from normal to one hundred or more in the evening, when there is no appetite, and the gastro-intestinal symptoms, gaseous distention or diarrhoea is marked, the following treatment has been suggested and has proved eminently successful in three very severe cases.

1. The patient is put to bed and is kept there until the temperature returns to normal. The patient is put to bed for several reasons: First, because of his weakness; second, because of the temperature, and third, to prevent an increased acidosis.

Landergren, quoted by (8) Joslin, increased the acidosis in a patient by combining muscular work with a diet from which carbohydrate was excluded. By this means, not only was the carbohydrate in the diet but the carbohydrate stored in the body as glycogen was rapidly depleted and was not available for counter-acting the acidosis.

2. The patient is put on a strict carbohydrate diet. Animal proteids are not given until the improvement is certain and fats at all times are prohibited. Even after remission has occurred fats are discouraged. The patient is put on a carbohydrate diet in order to combat the acidosis. If a patient is kept on a carbohydrate free diet for three successive days, the urine voided at the end of that time, will show a reaction for diacetic acid with ferric chloride. Fat here is excluded for the same reason. In that disease where acidosis has been best studied, diabetes, fat is the chief course of the dreaded acidosis. There is a close dependence of acidosis on a fat diet. In diabetes, severe acidosis can be produced by the ingestion of a quantity of fat and in many instances, can be prevented by the withdrawal of fats. According to Allen "fat unbalanced by adequate quantities of other food is a poison."

3. Chlorides in food are excluded, even though there is an absence of free hydrochloric acid in the stomach and hydro-

chloric acid is frequently prescribed. In all our patients there was more or less oedema of the skin, and of the lower extremities. In all cases the taking of quantities of salt has greatly emphasized this condition while the removal of the salts has decidedly diminished the oedema. An increased oedema has always followed the ingestion of a considerable amount of salt.

4. Patient is given a dram of bicarbonate of soda twice a day, generally around 11 a. m. and 4 p. m. The bicarbonate of soda is given as in diabetes to counteract the acidosis.

5. Calcium carbonate is given in 15 grain doses, four times a day. The lime salts are given because of their increased excretion and because of their efficiency in the treatment of other forms of acidosis. For instance, Kahn and Kahn have had excellent results in the treatment of mild diabetes following the intravenous injection of lime salts.

6. Arsenic is given by the mouth as Fowler's Solution, five drops three times a day. Sodium cacodylate is given intravenously daily, starting with a box of 1 1-2 grain ampoules, then going to 3 grain, 7 grain, and if possible 10 grain ampoules. Whether or not we are mistaken, it seems to us that by safe-guarding the patient against acidosis, the patient has been able to take larger doses of arsenic without exhibiting toxic effects.

7. At the same time iron, preferably as Bland's or Vallet's Mass is given in 3 to 5 grain doses, three times a day.

8. The Wassermann reaction is positive in a number of cases. In all such cases, even in those where a history of Syphilis is remote, in addition to this proposed treatment, mercury and iodide should be given.

9. All sources of infection should be removed. Especial attention should be given to the condition of the mouth, teeth, etc. In one of our cases, the X-ray revealed abscesses at the roots of a number of teeth, and these observations were confirmed with the extraction of the teeth.

Following improvement and the best index of improvement is the disappearance of fever and the return of appetite, a more liberal diet is permitted. Lean meats of all sorts are allowed in greater quantities, with still a restriction of fats. The hypodermic injection of sodium cacodylate may be discontinued, but arsenic and other drugs continued until a count of at least three million red blood cells is reached.

At all times the patient must be under close observation. There is always the danger of relapse, and each recurring attack is more difficult to overcome. The first may be fatal. The patient may have the second attack, and the third is generally fatal.

Character of Cases New Treatment Benefitted.

The three cases treated according to this method resembled each other closely.

The temperature varied from 99.5 to 100.5 in the evening. The insidious onset without apparent cause; with weakness, shortness of breath, anorexia, gastro-intestinal symptoms, with nausea, gaseous distention, and some diarrhoea, pallor of the skin and mucus membrane and straw yellow tint. In all a haemic murmur was heard at the base and apex of the heart.

The Wassermann reaction was negative in all of these cases. The red cell count varied from 800,000 to 1,200,000. There was a leukopenia with a relative increase in lymphocytes. The haemoglobin was low but compared to red cell count relatively high; the color index over one.

Adhering strictly to the treatment outlined, there was a general improvement, with the disappearance of temperature, in from four to five weeks. The symptoms disappearing gradually, the appetite returned, and in another two or three weeks, with absence of temperature, the blood arose to around 3,000,000 cells, ordinarily the limit for remissions.

In one case following a fracture there was a recurrence of symptoms, and a return of the anemia. Relapses are always more resistant to treatment, and this case was no exception. The temperature persisted longer, and the blood forming organs reacted more slowly. However, at present the condition is practically the same as it was before the accident.

New Treatment Marked Improvement Not Cure.

In conclusion let me emphasize that we are not offering a cure for the disease. Possibly that will not be reached until the etiology is determined. We believe, however, we are advocating a method, in keeping with experimental, chemical and clinical facts, which is an improvement over others, and our results seem to warrant continued observation and study along these lines.

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A Physician's Experience.

The best all-around medicine for continuous and daily use, fool-proof and non-injurious, quick acting and soul-satisfying is a morning glass of Pluto Water, together with a glass of plain water at least fifteen minutes before breakfast, taking just enough to produce one daily stool, writes Dr. H. N. Jennett of Kansas City, Mo.

The absence of griping is a marked characteristic of Pluto Water. This is due to the fact that it acts as an intestinal bath rather than as an irritant of the mucosa, as characteristic of most cathartics and even calomel. The advantages of this kind of elimination are apparent, especially so when the continued use of laxatives become necessary.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

A REMARKABLE ANTISEPTIC.

By Douglas Macfarlan, B. Sc., M. D., Philadelphia, Pa.

The host of antiseptics and their champions are innumerable and will probably continue to be so until the end of time. However, there is little reason for the "every-day" practitioner to have more than a few of these well understood for his general use. The relative antiseptic value of the commonest germicides has been conclusively established and a preference now should only be expressed on account of the various adjunctive effects of the drugs selected.

The table compiled by William H. Park of the New York City Health Laboratories is very comprehensive and gives at a glance the relative germicidal merits of the common antiseptics.

Table of Relative Antiseptic Values.

Alum	1:222
Alum Acetate	1:6,000
Amm. Chloride	1:9
Boric Acid	1:143
Calc. Chloride	1:25
Calc. Hypochlorite	1:1,000
Acid Carbolic	1:333
Chloral Hyd.	1:107
Cupric Sulph.	1:200
Ferrous Sulph.	1:200
Formaldehyde (40 per cent)	1:10,000
Hydrogen Peroxide	1:20,000
Mercuric Chloride	1:14,300
Mercuric Iodide	1:40,000
Formaldehyde (Pure)	1:25,000
Silver Nitrate	1:12,500
Thymol	1:83

By this table, the red iodide of mercury appears by far the strongest. It is with a solution of this salt that the following notes deal.

Red Mercuric Iodide, HgI_2 , is readily soluble in aqueous or alcoholic solutions of Potassium iodide and a new salt is formed, the double iodide of Mercury and Potassium, K_2HgI_4 . If the solvent solution is too weak in KI, the yellow crystals of this salt separate out. For practical purposes, and to insure its permanence, approximately twice as much KI as HgI_2 is added. The strength of the solution is roughly judged by the amount of red iodide of Mercury used, for the excess of KI is actually an indifferent factor. For a one-per-cent solution, the following formula will suffice:

Px.	
Merc. Iod. Rubr	1 gm
Potas. Iodidi	2.5 gm.
Aq. Destil	100 cc.

The two important factors in having a

permanent solution are the use of distilled water and plenty of KI.

Experiments were made to see the exact antiseptic value of the solution, with the following results:

In the first series, a hardy strain of staphylococci was used, and these found it impossible to exist in media where the double iodide was present in dilution of 1:80,000. In 1:100,000 media, three small colonies were observed in one plate and in another of the same dilution, a scattered half-dozen were present. Above these dilutions, the cultures became progressively more prolific.

Again, with a strain of typhoid bacilli, approximately the same results were obtained. In the neighborhood of 1:80,000, the solution was germicidal; from 1:80,000 to 1:100,000, growth was inhibited.

As to practical use, there is every evidence to believe, and the results are assuring, that this new antiseptic is as strong in practice as in experiment. As may be imagined, its use was first tried on microbial affections of the skin, and upon these, it was found to have a marked effect. Long-standing acne, cryptogenic infections, erysipelas and, in fact, the whole realm of superficial skin infections respond remarkably to its action. On erysipelas, the most rapid results are obtained, a fact which has been verified in repeated instances. When the deep-seated inflammations, such as boils and felons, are met with, there seems to be much evidence of some power of penetrability, which the drug possesses. A wet compress applied in such circumstances alters entirely the prolonged progress of these cases. The indurated, tense tissue rapidly subsides in its acute inflammation and the pus begins to "point." A one per-cent solution is to be considered very powerful in such cases, anything stronger being both unnecessary and liable to irritate. The tendency with this antiseptic is to use it too strong, but this is, in a measure, safe-guarded by its comparatively low irritating qualities. The solution being clear, colorless and odorless, the senses are deceived into presuming impotency. These points are well understood when it is realized that a dilution of one in eighty thousand is germicidal, and that a one per-cent solution may be used on the skin with seldom any irritation.

It is this last fact that makes this drug such an ideal antiseptic for surgical clinics where hurried, careless work is at times seen. There is little danger of harm being done from the making up of the so-

lution from a 1 per cent stock jar, for at least nothing stronger than 1 per cent can be made, while on the other hand, there is still wide latitude for dilution. Much more could be said in enumerating different conditions where this antiseptic can be applied. Suffice it to add that it is thoroughly reliable in whatever germicidal capacity it may be used. A most casual trial will show its virtues and to this trial its remarkable qualities most earnestly recommend it.

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On the Treatment of Pneumonia.—Dickson, in *The British Medical Journal*, in speaking of the slight progress made in the treatment of pneumonia, says that enough stress cannot be laid on the "enormous importance of rest." Cardiac weakness is so pronounced that the patient can actually die from the effort of sitting up in bed.

Following the doctrine of Professor Greenfield, Dr. Dickson considers that there are two essential parts in the treatment.

(1) Absolute rest—the value of which cannot be over-estimated.

(2) All cases are given tincture of strophantus, from the time the diagnosis is made, in sufficient doses to keep the pulse satisfactory. Early dosage is extremely important; it is absolutely wrong to wait for signs of heart failure.

The dose of strophantus varies with individual reaction to the pneumotoxin.

Strychnin the author considers as positively harmful. Heroin, 1-6 grain hypodermically, is beneficial. It quiets the cough and induces sleep.

It should be remembered that the active principle of strophantin readily undergoes decomposition when diluted in water, so it should be prescribed as the tincture alone, and not made up with water in bulk.

A BRIEF SURVEY OF FOOD VALUES, AND THE CARE OF FOOD IN MARKET AND HOME.*

By George M. Niles, Ph. G., M. D., Atlanta, Ga.

Nearly two thousand years ago a panic-stricken jailer asked Paul and Silas "What must I do to be saved?" That question has ever since been asked for many reasons and in various forms—one insistent form being "What must I eat to be saved?" a question to which answer is made by a shouting multitude of enthusiasts, cranks, and faddists, each with an infallible dietetic system of his own.

It is not my purpose to touch on any of these dietetic monstrosities, but, admitting that the health and welfare of individuals and of peoples must depend on right methods of living, it is a fair contention that of all methods of living the most momentous are those relating to the up-keep of the body by food consumption. It is food that supplies the material for that perpetual series of transformation in which life consists, and it must be adequate in quantity and suitable in quality, if these transformations, of so many different kinds, in so many different organs, are to proceed with that nicely balanced adjustment called health.

Fuel for heat and energy, stuff for repair, in proportion to work done and waste incurred, must be requisitioned, if one is to live and physically prosper. Could we but secure adequate food supplies and an equitable redistribution of the same, restricting gluttony on the one hand, and preventing under-feeding on the other, we should vastly lighten the task of the sanitary and social reformer.

The first step in this direction, however, is to impart to the masses a clearer conception of the real meaning of food values. Not to look on the whole range of food products simply as a conglomerate store to keep body and soul together, failing entirely to comprehend their heat and energy potentialities; nor is it necessary in the consideration of domestic science to delve too deeply into the study of calories, or heat units, contained in sundry dietaries. What every well-informed individual should acquire, however, is a fundamental knowledge of the basic elements contained in what we eat, so that our daily meals may represent more than mere material to tickle the palate or keep burning the vital spark.

*A lecture recently delivered before the Parent-Teachers' Association, Atlanta, Ga.

The chemic elements, of which the body is composed, are similar to those contained in the food-stuffs generally employed, embracing fifteen or twenty, which in turn form a large number of compounds. These compounds are most conveniently grouped under the headings of proteins, fats, carbohydrates, mineral matter and water.

Water enters into the composition of every tissue in the body, and forms more than sixty per cent of the entire body weight of every full-grown adult. Though absolutely necessary to life, water is not burned up in the body, and furnishes no energy.

The earthy salts, such as chloride of sodium, or ordinary table salt, and the various compounds of lime, potash, etc., enter into the composition of the bones and teeth mainly, but are also essential to the other tissues and fluids of the body. Though they furnish but little energy, they serve somewhat as a leaven, being indispensable to life and health.

Among the food elements protein is the strenuous one, having manifold duties to perform in the animal economy. Representative proteins are the lean and gristle of meat, the white of egg, the gluten of grain, and the curd of milk. They are of the greatest value, for they help to build up new tissues and to repair the waste of the old; they are also burnt up in the body, yielding much of our energy and heat. Further they may be converted into fat, and stored in the body for future use, just as a provident man would bank his surplus for a rainy day. Proteins form an essential part of the diet, for without them, or when they are supplied in too small quantity, the body wastes and malnutrition supervenes.

Carbohydrates include the starches, the sugars and vegetable fiber. They are burnt up in the body, their energy is changed into heat or used up in muscular work; they may also be converted into fat, and stored up in the nooks and crannies. This should be an eye-opener to certain corpulent individuals, who won't eat any butter or fatty articles, but who consume liberal quantities of bread and starchy vegetables.

Fat is an important element of food, serving the same purpose as carbohydrates, more valuable weight for weight as a source of energy, but not so easily digested. When taken in excess of the needs of the organism, fat is usually stored in the fatty tissues, and a healthy body should contain about fifteen per cent,

Apart from the effects of certain diseases, the tendency toward leanness or obesity depends more on personal habit and heredity than upon the quantity of food taken.

Combustion is at all times actually going on in the body just as much as in a furnace or grate, each animal organism standing as a fully equipped manufacturing plant, ready to take in the raw material, prepare it for assimilation, burn the food as fuel in the furnaces, extract from it energy units both mental and physical, set aside a certain proportion for repair and maintenance of plant, and finally dispose of the waste and unavailable portions.

The well-rounded and correctly-balanced body needs all of the elements in both animal and vegetable forms. Our food customs represent the outcome of profound instincts, which correspond to certain wants of the human economy. They are the fruit of colossal experience, accumulated by countless millions of men through successive generations, and I beg my hearers to ponder well before subscribing to any fad which would materially alter the generalized food customs of the healthy and sane middle classes of our American civilization.

As to the care of food in market and home, I shall briefly discuss some of the methods of preserving it in a wholesome and palatable condition.

By preservation of food is meant the process by which the food is so changed that it can be kept for a longer or shorter period of time without undergoing putrefaction. The phenomenon of fermentation is induced by micro-organisms present in the atmosphere coming in contact with food, and contaminating it. Since putrefactive germs require a certain amount of moisture and heat for their growth, such foods as contain little water, and that are not kept too warm are not so likely to undergo decomposition; while foods containing much water ferment easily.

The four principal means of preserving food are by drying, exclusion of the air, refrigeration, and treatment with antiseptic chemic agents.

By drying, a large proportion of water is abstracted, and not only are many meats preserved this way, but also such vegetables and fruits as peas, beans, peaches, apples, berries, etc. When meats or fish are dried, the process is generally aided by the antiseptic power of smoke, some of which being absorbed. Though

the outer surface of smoked meat is tough and dry, the inside is more tender and digestible, possessing a flavor that encourages valorous gastronomic feats, and an enticing odor that has caused many a dusky son of Africa to depart from the path of rectitude.

Air may be prevented from coming in contact with food in a number of ways: by immersing in oil or fat; by heating the food so as to evaporate the external layers; by coating with some impermeable substance, as oil, salt, varnish, or paraffin.

Canning is one of the most familiar methods, and before so much of it was done in the large commercial canneries, many a thrifty housewife did not consider her summer duties complete till the pantry shelves were filled with a serried array of cans and jars.

In order to properly preserve by exclusion of air, it is highly important that the food be perfectly fresh, and that any air present be expelled.

By exposure to cold, or adequate refrigeration, food can be preserved indefinitely, but let me stress the caution that meat and fish kept this way should be cooked at once after thawing; and I might mention also that frozen meat loses about ten per cent more of its nutritive value than fresh meat.

The use of cold storage for indefinite periods of time should be condemned, and storage warehouses should be compelled to brand all stored food as such, as well as the date of entrance. Were this law in force, we would not risk eating eggs laid by fowls long since gathered to their fathers.

Under ordinary circumstances the only chemie agents allowable in preserving food are salt, sugar, vinegar, and wood smoke. Before the recent pure food laws went into effect, the sophistications were legion, among the number being sulphur vapor, weak carbolic acid, strong acetic acid, injections of alum into the blood vessels, boric acid, benzoate of soda, salicylic acid, formaldehyde, etc.

While some of these chemicals taken in small quantities do not disturb digestion, nor interfere with nutrition, when they are regularly taken with the daily food for a considerable length of time, they are liable to seriously undermine the general health. The fact that certain individuals may take small amounts of certain food preservatives for long periods of time without injury is no argument in favor of their use, as we have no method of

determining who will be or who will not be injured in this way.

Dr. H. W. Wiley, who has been chief warrior in the battle for pure food, states positively that there is no necessity for using either chemie preservatives or artificial coloring matter in food-products. Dr. Wiley has had a difficult fight, and the echoes of some of his battles have in several instances reverberated right here in Atlanta, as those of you who keep in touch with current events will recall.

The demand for pure and unadulterated food is only one of the many evidences of an enlightened conscience and advancing civilization. By proper and intelligent care in the market and home, all manner of meats with vegetables and fruits in and out of season are no longer a luxury of the rich. In the American grocery we may see side by side on the shelves pineapples from Florida, okra from Louisiana, sweet corn from New York, peaches and asparagus from Georgia, peas from France, string beans from Scotland, salmon from British Columbia, mutton from Australia, and sardines from Italy.

That this wealth and variety of food-stuffs should be honestly prepared, so that deterioration may be reduced to a minimum, is our right to claim. A working knowledge of their values is our duty to acquire. We have much to learn in the way of economy in food, but the best economy is in the preparation and care of food, so that our "daily bread" in its largest sense may be conducive to bodily vigor, to stamina of constitution, to alert mental processes, and increased longevity.

During 1916 and 1917 the dead and damaged muscle in which gas gangrene could develop was removed by operation as soon as possible. The majority of cases of gas gangrene occurred among men who had been brought to the casualty clearing stations over long distances, or who were too weak to endure operation. When gas gangrene is developing the blood pressure rises at first, and the medical officer may think that the man is recovering.

In the acute spreading gangrenes of limbs, B. Welchii was found by Bull to be the chief organism. An intense toxemia occurred only in the later stages just before death. Other forms of gas gangrene of intense toxemic type gave positive blood cultures of the *Vibrio septique*. Bull found an exotoxin produced by B. Welchii, and by injecting this obtained an antitoxic serum.

THE IMPORTANCE OF EARLY AND EFFICACIOUS TREATMENT OF CORYZA, RHINITIS, ETC.

By A. H. Werner, M. D.

Dr. Bresgen in his paper in the *Journal of Medical Practice*, 1900, No. 3 and 4, says: The recognition of the necessity of local treatment of all affections of the nasal passages gains ground only very slowly and in spite of the fact, that already a half century ago when we did not know how to examine the nose with mirrors. Dr. Piorry the great diagnostician said: The importance and danger of the inflammation of the mucous membrane of the nose and throat cannot be under-estimated and at the same time expressed his great regret that there was not an efficacious remedy against this affliction. Even the slightest inflammation of the nose should be treated and if neglected the consequences may become more or less serious. The complications affect the pharynx, larynx, trachea, bronchials and the lungs. An efficacious remedy would decrease bronchitis, bronchoblennorrhoea, emphysema and even tuberculosis of the lungs.

The importance and danger of an acute rhinitis for the human system lies in the fact that the nose-breathing is greatly impaired and also in the closure and inflammation of the cavities and channels which are in communication with the nasal-passages. The symptoms of an acute nasal-catarrh are well known and everybody fears it at least as something very unpleasant and the patient who frequently suffers from same is always afraid of a new attack.

In the first instance we can understand why the sufferer neglects to do anything for it, because he looks upon it as a slight inconvenience which must run its course. However when a patient at every change in the weather gets a fresh "cold" from which he suffers for a period of three or four weeks he should be compelled to do something. He is not only a danger to himself but also to the community and predisposes him to all the dangers which Piorry already has pointed out some sixty years ago.

In adults an acute nasal catarrh may not be followed by any serious consequences; but in infants and young children very dangerous conditions and complications may arise, viz: Adenoids, tonsillitis, otitis media, matoiditis, etc. It is well known that such a condition very seriously interferes with the nursing of the

infant as it is unable to breathe freely through the nose; it becomes restless, is compelled to let go the breast or nipple and begins to cry. The health and very life of such an infant is in jeopardy. A normal and healthy child when at rest always breathes with its mouth closed. However if the nostrils are closed by mucus the baby must first learn to breathe through its mouth. On account of this its sleep will be constantly interrupted, because as the mouth is naturally closed respiration is impossible. Therefore we have here two very serious conditions which greatly interfere with the well being and development of the child, viz.: Disturbed nutrition and disturbed sleep, not to mention the anxiety of the mother, etc. A repetition of such a nasal catarrh becomes more serious and takes longer to get well.

The throat which is richly supplied with lymphatic glands is liable to other infections of which the dreaded diphtheria is the most frequent. Any observing physician knows that children who are mouth-breathers are constantly suffering with diseases of the throat. In school we find them mentally and physically backward.

The mucous-membrane of the mouth rapidly becomes dry by mouth-breathing, whereas the mucous membrane of the nose, due to its rich vascularisation, constantly retains its moisture. The former is the reason why it is such a feeling of wretchedness in an acute rhinitis because of not being able to breathe with a closed mouth.

The dryness of the mucous membrane of the mouth causes a destruction of the delicate superficial plate-shaped epithelial cells, which again causes an exposure of the deeper lying tissues which also become dry through mouth-breathing and shows cracks and fissures so that there is no obstacle for a bacterial invasion. (Bacteria being always present in such great abundance in the saliva of the mouth), the consequences of such an infection cannot even be estimated.

We also must take into consideration, that the dry mucous membrane causes irritation, forcing us to swallow; and that this is only done with difficulty inflicting pain, because the membranes on account of their dryness are sticking together resulting in friction and larger fissures, so that the injuries which exist already are still more aggravated. The inflammation of the tonsils is common in all mouth-breathers and is largely responsible for the entrance of the micro-organisms causing articular rheumatism, endocarditis,

pyorrhoea, etc. The so injured mucous membrane provides the most opportune gate of entrance for the T. B. Since we have recognized that the so called scrofulosis is nothing less than a tubercular condition, in which as a specific symptom we recognize an enlargement of all the lymphatic glands in the throat and neck, then we must realise the great importance of an undisturbed nose-breathing. In a free and undisturbed nose-breathing dust and micro-organisms are retained and prevented from entering into the throat by the very fine hair in the nasal mucous membrane and are expelled by the nasal-secretions which at the same time have the power to neutralise the toxins of the pathogenic bacteria or other micro-organisms.

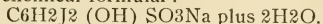
If we still were in doubt with regard to the danger of a coryza affecting the organs of respiration the epidemic and pandemic occurrence and recurrence of influenza, cerebrospinal meningitis and poliomyelitis during the last ten years should supply us with the most convincing evidence we can desire. I am positive that during the last decade more people died from influenza and diseases of the heart than in any similar period of time. Not to mention the many acute inflammatory conditions of the ear.

Sneezing and coughing in diseases of the heart is always dangerous to life and also frequently leads to inflammation of the middle ear.

Now if we may have all these serious consequences after one acute attack of rhinitis how much greater must be the danger when a patient suffers with a periodical recurrence of the same complaint.

This treatise would not be worth the paper it is printed on if in conclusion I could not suggest something which after long clinical experience has proven to be the most efficacious remedy in the fore-mentioned trouble.

This is the sodium salt of diiodoparaphenolsulfuric acid which has the following chemical formulæ:



This salt in a 10 per cent suspension of some neutral base should be used in powder form and insufflations be made into both nostrils morning and night. Care should be taken in instructing the patient how to insufflate. The nozzle of the powderblower should be held at a right angle to the nose and the nozzle for the length of one inch introduced into each nostril when a gentle squeeze of the rubber bulb will distribute the powder evenly all over the nasal cavities. The best proof of a

successful insufflation is when we see a certain amount of the powder return from the other nostril and the mouth.

As this preparation is absolutely non-toxic and non-canterrishing it can be used indiscriminately and without any danger by the patient himself.

306 Haven Avenue, N. Y. C.

The Open Air Treatment of Influenza.

—Brooks (The American Journal of Public Health) says that when this influenza broke out, the autopsies at the Naval Hospital showed that the men died not from heart failure, but from abscesses in the lungs. This explained why heart stimulants had had practically no effect on the cyanosed patients, and that they died not from heart failure but from lack of air.

Thereafter, on pleasant days, every patient was taken out of the tents at the Tent Hospital which had been rapidly set up. From the first day the results were startling.

At the end of three weeks the epidemic on the ships was practically under control, and in a few days over four weeks the Tent Hospital was closed.

The following facts were deduced from the experiences of the first tent hospital:

The period of incubation apparently varies, averaging about two days. Fatigue seemed to play an important part.

The infection itself was a mixed infection, and where Type III of the pneumococcus predominated many of the cases were fatal.

Very little medicine was given after the value of plenty of air and sunshine had been demonstrated. Practically only three drugs were used: Dover's powder, some form of aspirin, and iodide of lime in one-third-grain doses. The patients were fed every two or three hours, and given a variety of food with plenty of fruit. They were also made to drink plenty of water.

Improvised wire masks were made out of ordinary gravy strainers. The strainer was made to fit the nose, and 5 layers of gauze were simply basted on to the wire frame. The gauze on the masks was changed every two hours.

Every nurse and attendant was cautioned that, after working over patients, the hands should be washed thoroughly either in 1-1000 corrosive sublimate solution, or in a solution of triple lysol.

The efficacy of open-air treatment has been absolutely proven, and one has only to try it to discover its value.

CEREBRO-SPINAL MENINGITIS.*

By Dr. W. P. Beall, Greensboro, N. C.

E. F., male, age about 16, on August 21-22 complained of obstinate constipation, with dull headache, and some languor. Several doses of purgatives were given, resulting in free purgation on 23d with some relief of pain.

On 24th appetite poor, ate very little, headache persisting, and seemed unwilling to any physical exertion, though he dressed and sat up all day. No history of fever.

About midnight of 24th developed symptoms of cholera morbus, violent vomiting and frequent purgation, with severe pain in bowels and head.

Domestic remedies affording no relief I was called to see him about 6:30 a. m.

I found patient in a semi-stupor paying little attention to surroundings, or to questions, apparently not hearing them.

The skin was pale, wet with cold, clammy perspiration, pupils dilated to fullest extent, not responsive to light, pulse 136, respiration 36. He was very restless, rolling on bed and groaning as though in pain. Atropine 1-200 and strychnine 1-60 were given hypodermically at once, and in twenty minutes perspiration was checked, and skin flushed and warmer. As pain continued, hypodermic of morphine 1-10 was given at 7:30, which relieved the pain and patient became quiet. At 8 o'clock I left him, and returned at 9:15. Found him worse; lying on back, muscles of neck and back rigid, teeth tightly clenched, eyes deflected to left, pupils fully dilated, respirations 50-55, pulse thread-like almost imperceptible at wrist, heart beats 160. Kernig's sign present. Death occurred at 10:15.

I admit that the diagnosis is open to criticism, the obscure history given and rapid termination of the case making it uncertain, but nothing else seemed to me permissible. Temperature was not taken at any time, nor was there any history of diminished action of kidneys. The rapid progress of the case to a fatal termination prevented any careful study.

The literature regarding duration of the disease gives three or four days to a week as the average in fatal cases, but a friend looked up and furnished me with the following statistics:

Osler reports a girl in Philadelphia dying in 20 hours. Stille, a boy 5 years old,

dying in 10 hours. Gordon, a case in which entire duration from first symptoms was only 5 hours.

Andrews reports two cases in same family. First, girl, 5 years, taken sick at 2 p. m., died at 9 p. m.; a brother, age 7, was taken sick at 2 p. m. next day and died 10 p. m.

S. Gordon of Ireland reports one death in 5 hours and a large per cent of deaths to occur in 12 to 48 hours.

Hanner, in Boston Medical and Surgical Journal, 1888, reports a case dying in 6 hours, where diagnosis was confirmed by autopsy.

I wish to add this case to these statistics, unless the experience of some of the gentlemen present contradicts or disproves the diagnosis.

Bladder Injuries in Wartimes.—Fullerton (British Journal of Surg.) says that injuries to the bladder form a very small proportion of the total wounds reaching the base hospitals. The proportion is about 1:3000 or 1:4000. Prognosis depends to a great extent upon associated injuries. The author's report is based on a series of fifty-three cases, thirty-five nearly 70 per cent, being complicated by injury to the intestines, or bone or both. In twenty-six cases there was an injury to some part of the lower intestine and thirteen of these were also complicated by some bone fracture. Nineteen cases were complicated by injury to the rectum. The small intestine was also injured in six cases.

The mortality of bladder injuries is very high. There were in this series of cases thirteen deaths. The chief causes of death have been pelvic cellulitis, peritonitis and sepsis. The chief sequelae are bone necrosis, cystitis, calculus and stricture of the neck of the bladder.

The Pandemic in Macedonia in the Spring of 1918.—That other territories were attacked as early as Spain appears to be shown by an account of the disease in the French Macedonian army in May-June of that year. This outbreak was at first confused with pappataci fever, but was soon identified with influenza when pulmonary complications set in. It is now fairly certain that the same affection appeared in Spain, Italy, and Macedonia at about the same time, but that for some unknown reason Spain became the chief distributing point.—Office International d'Hygiene Publique.

*Read before the Eighth District Medical Society September 24, 1919, at Greensboro, N. C.

Pneumococcus Antigen.

More than ten years ago, Dr. E. C. Rosenow, Mayo Foundation, showed that the autolytic extract of highly virulent pneumococci contained an anti-opsonic substance. It was found that it was possible to separate much of this anti-opsonic substance from the antigenic substances in the protoplasm of the organisms. Their gross experimental characteristic were quite distinctive, the toxic or non-antigenic substances, when injected caused marked local reaction, leucocytosis and fever; the non-toxic or antigenic portion when injected produced no reaction to speak of, no fever nor leucocytosis. Serologically also, the distinction was found to be wide; the toxic substances had practically no effect on the opsonic index, did not confer immunity after repeated injections, and proved fatal to animals injected intravenously; on the other hand, injection of the non-toxic substance was followed by a marked rise in the opsonic index, and by immunity. Furthermore, these substances were shown by the immunity curve to be antagonistic in simultaneous injection.

Such a formidable array of distinctions could not fail to excite interest in their therapeutic possibilities. Dr. Rosenow began immediately the study of the problem and carried it on both from the laboratory and clinical standpoint. Data have been collected from hundreds of clinical applications of Pneumococcus Antigen indicating its value. In a series of 200 cases, ranging in age from five to fifty-eight years, in which diagnosis was made by clinical history, physical findings, cultures, etc., the mortality was only seven per cent. Crisis or lysis occurred in a number of days dependent on the time treatment with the antigen was begun; in those injected on the first day, the average duration of the pneumonia was three days and a half; on the second day, five days; and on the third day, seven days. Early crisis or lysis was observed in most cases due to all types of pneumococci. These facts serve to emphasize the value of early administration of the antigen.

Pneumococcus Antigen (V 903) is made by Eli Lilly & Company according to the method of Dr. Rosenow. The results obtained by Dr. Rosenow and his co-workers were duplicated by many physicians in their private practice during the fall and winter of last year. Disregarding the probable recrudescence of influenza and its complicating pneumonias, this winter, it is a well known fact that pneu-

monia in its more typical forms has always been more prevalent for years after epidemics of influenza. There is no doubt that the opportunities for the further use of the antigen will definitely establish it as a valuable aid in combatting this dreaded infection.

Physical Treatment in Relation to Orthopedic Surgery.—Bristow, in The London Lancet, read a paper at the recent clinical meeting of the British Medical Association held in London on the above subject. The doctor urged most strongly the need for thorough co-operation between the surgeon and physio-therapist. They were working for a common end, the ultimate restoration of function, and frequent consultations should take place between the surgeon and those in charge of the special departments, so that the surgeon should have the opportunity to indicate the general plan which he proposed to follow in any particular case. There was often useless and needless waste of time occasioned by treating patients who would derive no benefit and for whom all that could be done had been done. Efficient supervision by a competent medical officer could alone obviate this. The need for men with general clinical experience and a good sound general knowledge of medicine and surgery was apparent. The ideal officer was a general clinician first and a specialist afterwards. It was very important to keep in mind the prominent part that re-education played in physical treatment, whatever method was adopted.

War Headache and its Surgical Treatment.—Rawling (British Medical Journal) urges that in the treatment of war headache the following steps should be taken: 1. That all other measures should be given free and fair trial with a probationary period of about three months, unless urgency prevails. 2. That operation should be reserved for the more acute cases and for those more severe chronic cases where the patient is rendered miserable by reason of headache and associated incapacity. 3. That the operation should be so conducted as to provide adequate decompression effect, and that trephining should be carried out under cover of the temporal muscle. There should be such removal of bone and such dural incision as shall allow the escape into the temporal tissues of the excess cerebrospinal fluid, sufficing to lower adequately the intracranial pressure.

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EDWARD C. REGISTER, M. D., EDITOR

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CARDIAC DYSRHYTHMIA AND DIGITALIS.

As was laid down in the first part of this discussion, the vague centers furnish the innervation for the pace making of the cardiac rhythm.

Obviously the rhythm and pace would not vary if the demands upon the cardiac fibers were always the same, and if the nerve centers of the vague always sent out to the heart, the same nervous impulses. But the demands upon the heart do vary, and what is more, the vagus centers receive impressions from many sources, so that the output of those centers can not always be of the same nature.

The so-called autonomic nervous system may be said to keep the heart informed regarding what is going on in the body, while the sympathetic nervous system sends to the heart the impressions that come to that system, from matters and facts outside the body. Normal conditions, and abnormal conditions of the body send varying impressions to the heart through the autonomic nervous system; and the sympathetic nervous system must work over into nervous impulses, the information coming from all grades of stimulating and depressing phenomena outside the body.

From these common-place physiologic statements, it is very evident that some of the very important pacemaking factors of the cardiac rhythm, are not only entirely outside of the heart itself, but outside of, and beyond the control of the vagus centers as well. The organic lesion that produces the dysrhythmic substance that is circulating in the body fluids, may be an incurable lesion: it may not be possible to remove the patient from the environment that is demoralizing the sympathetic, and thus causing disturbing nervous impulses to be sent to the heart: all this may be true, and yet notwithstanding the fact that the cause of the trouble still remains, digitalis may greatly relieve the patient.

Through the stimulation of the vagus centers, conductivity of nervous impulse is lessened. The pharmacologic action of digitalis, is that of inhibition. Digitalis is

an irritant to the centers of the vagus. Through the nerve impulse inhibition, thus brought about by the irritant, the excitability of the muscle fibers of the heart is protected from abnormal stimulation; and, freed from having to carry the abnormal load, the heart returns to its normal rhythm.

As has just been pointed out, the exciters of muscle fiber contractility may, while digitalis is being used, still be present, but under the pharmacologic action of digitalis the heart may long enough be protected against their enervating influence, for the building up of a systemic tone, which will stabilize rhythmicity, even in their company. Digitalis is in no sense a food for either muscle fiber of the heart, or for nerve cell structure. It is a poison to the heart fiber (Cushney). It stores itself up in the heart, and adds its own irritating chemical action, to the normal contractility of the muscular fiber; and by supplying irritating stimulation to exhausted heart muscle, digitalis bridges the patient over a failing heart crisis. Digitalis aids coraiae anabolism, only by slowing cardiac rhythm.

Digitalis is specific for cardiac fibrillation (Macleod). And fibrillation is the only dysrhythmia of the heart for which digitalis is specific treatment. Indeed there are conditions in which there is positive peril, in the use of digitals. In conditions of "shock," the use of digitalis is actually harmful (Crile). Just where the demands for heart support are the most urgent, and just where digitalis is likely to be first thought of, as in shock, is one of the conditions in which digitalis is not useful.

When extra beats are interpolated, it may mean that there is heightened conductivity of the nervous system, in which case the heart needs the inhibitory protection of digitalis. When there is a dropping out of beats, there may an increased inhibitory tension in the bundle of his, and so digitalis would but aid to the trouble.

There is no other one drug, in the study of whose pharmacologic action, so much has at one time been learned that at some later time has had to be unlearned, as has been the case in the study of digitalis. Regardless of the views and hopes of the prescriber, digitalis will follow its physiologic course in the body. The drug does only a specific thing. If the structural or functional pathology which is back of the cardiac dysrhythmia is such that the pharmacologic action of digitalis antagonizes

it then, it is needless to say, the dysrhythmia will be relieved. Probably in no other instance in the prescribing of medicine in the treatment of disease, is the close study of the relationship of the existing pathology, to the pharmacology of the proposed medicine, of more importance, than in the therapeutic application of digitalis to the pathology that is responsible for the cardiac dysrhythmia.

THERAPEUTIC NIHILISM.

In the latter part of the last century, there were presented to the medical profession some very telling new object lessons in the treatment of disease. The cold but exhilarating facts regarding the effects of medicines upon the natural courses of disease processes, and which facts became object lessons, were the workings out of the principle and practice of control experiments, that are now common routine, in the work of biologic laboratories. The results from having taken into account the worth of the control patient, in making an estimate of what the taking of medicine does to disease, has of course, been of helpfulness to the cause of rational medicine. Truth never yet has harmed any worthy endeavor; but when the fact showed up that fifty unmedicated cases of rheumatism, did as well as fifty other cases of rheumatism in which the best medical treatment had been used, the object lesson seemed to spell out the worse than failure, of scientific medicine. True science is always cold blooded—is altogether unemotional, and so upon second thought scientific medicine accepted the findings of the control treatment of rheumatism, and as gracefully as was possible, proceeded to adjust therapeutics, to the proven cold facts regarding the natural course of rheumatism.

Therapeutics was the gainer, by this hurt to the pride of the so-called science of medicine; but the indisputable evidence presented by the experiment, was just about as joyously received by medical men of that time, as the failures in making diagnoses, with the help of all the light that the best work of the Massachusetts General Hospital could throw upon cases, as published by Cabot, have been received by some medical men of today. Therapeutics is, to begin with, in every case, up against the probability an inexact diagnosis. Physicians while making diagnoses, have in their minds, pictures of diseases. They note in the patient the presence of certain objective and sub-

jective symptoms. A symptom is considered to be representative of a certain pathologic condition. When the symptoms present are footed up, the physician gives a disease name to the footing, that the nearest corresponds with the make up of some one of his mental pictures of disease. Such is the process of making diagnoses. Let's not be ashamed either of the process, or of the diagnoses!

After the diagnosis has been made—after that kind of diagnosis has been made therapeutics is up against the further problem of prescribing a treatment that will make over the pathologic condition, into a physiologic condition; and the physician has very little of scientifically demonstrated fact that medicine has ever directly “cured” pathology, to warrant him in such a therapeutic undertaking. Here though, full appreciation of the fact that no medicine has ever been proven to have been the curative agent in such pathologic conditions as are being aimed at, does not conduce to therapeutic nihilism. On the contrary, such knowledge may result in the bringing out of a specific medication.

There is much more of therapeutic nihilism, in a shotgun prescription aimed at the impossible, than there is in the turning of a patient over to the mercies of the biologic likelihood that the body will succeed in restoring systemic functions, if let alone. Therapeutic nihilism, and courage to refrain from medication, are not synonymous terms. It seems to be ironic fate, that quackery of alleged therapeutic virtue, has reaped greater benefits from the ignored biologic tendency of the body to recover from disease, than honorable medicine has reaped from its full knowledge of the natural course of disease.

Honorable medicine has been slow to learn, and probably never will fully appreciate the fact, that therapeutic nihilism has its most conspicuous illustrations, in the offering of prayers for the recovery of the sick; in the laying on of hands; in reliance on “faith” of various kinds; in the analgesias of self inflicted hysteric states which deny the existence of disease; in the manipulations of the bone-setter; and in the polypharmacy of honorable medicine. The same logic that bases a cure of disease upon the fact that the patient recovered while taking a certain medical compound, will just as conclusively bring about a cure of disease by necromancy!

The polypharmacy type of therapeutic nihilism, had full sway in the army camps

during the influenza epidemic. Each medical officer was free to give medicines as he saw fit. A half dozen or more wards, were under the care of a single officer; and after the epidemic had passed and the results of the various treatments had been tabulated, it was found that the natural course of the disease had not been at all influenced by medication. However, out of the experience with that kind of therapeutic nihilism, it does seem that a little gain was made in the direction of specific medication. Careful study of the matter from all angles, appears to point to the conclusion, that the routine giving of digitals from the very beginning of the disease, so prepares the heart that it is the better able to meet the strain of crisis.

BULLETIN, NORTH CAROLINA STATE BOARD HEALTH FOR 1920.

Dr. Rankin, the Secretary of the N. C. State Board of Health is untiring in every field of effort to better health conditions, health literature and every possible other influence of helpful character. In planning the "Bulletin" for 1920 he has evolved the following rules for its bettering. We believe the new system is capable, with energetic effort that will doubtless accrue, of vastly improving the already admirable monthly publication of the Board, and thinking a knowledge of the "system" of grading the contributions of each bureau a literary endeavor, will prove interesting; it is published in full:

Plan of Bulletin for 1920.

1. The regular Bulletin will consist of sixteen pages.

2. Emergency matter, made necessary by some epidemic or other unforeseen occurrence, will be extra and not displace regular matter.

3. Editorial matter will occupy from two to three of the sixteen pages, and will be contributed by Mr. Wilson, Dr. Warren and Dr. Rankin. Suggested subjects, with underlying facts and objectives, for editorials will be appreciated by the Executive Office.

4. Personal hygiene matter will occupy from three to four pages, and will take the form of regular lessons carefully considered and arranged to cover, in a systematic and comprehensive way, the entire field of personal hygiene. This material will be contributed by Dr. Rankin.

5. Bureau material, that is material contributed by the special bureaus, will occupy ten pages, and, for the Bulletin

in which it appears, will constitute a special Bulletin on the subject to which it relates. This bureau material for 1920 will be contributed as follows:

January: Rural Sanitation Special—Dr. Washburn.

February: Venereal Disease Special—Dr. Knowlton.

March: Excreta Disposal Special—Mr. Miller.

April: Infant Hygiene Special—Author to be designated later.

May: Fly Special—Dr. Warren.

June: Typhoid Fever Special—Mr. Wilson.

July: Malaria Special—Author to be designated later.

August: Cancer Special—Dr. Miller.

September: Medical Inspection of Schools Special—Dr. Cooper.

October: Communicable Disease Special—Dr. Register.

November: Respiratory Disease Special—Dr. L. J. Smith.

December: Tuberculosis Special—Dr. McBrayer.

6. In the event that any bureau wishes to use additional pages, the bureau will be expected to pay out of its own funds the extra cost of the additional pages.

Rules Governing Contributions to Bulletin.

1. First-Hand Material: All material contributed to the Bulletin must be original in construction, except tables, graphs, and cuts, and no article must contain more than 25 per cent of quoted matter.

2. Articles Submitted One Month in Advance of Publication: All material must be in the hands of the Secretary one month in advance of the publication of the monthly Bulletin for which it is intended.

3. Use of Material Prepared by Others: The material submitted by a contributor to the Bulletin, but prepared by some other person, will be credited or charged against not the person who prepared it, but the executive officer submitting it, in exactly the same way as if the said executive officer prepared the material himself.

4. Grading: All material constituting the special feature of a Bulletin will be graded by the nine members of the State Board of Health, without conference, each member assigning to each special Bulletin a grade in terms of one hundred. The members of the Board will carefully record their grades for each monthly Bulletin, and on the first of January, 1921,

forward the grades for the twelve Bulletins to the President of the State Board of Health, who will, by adding and taking averages, secure the grade for each special Bulletin as determined by the nine members of the Board of Health voting independently. The President will then notify the Secretary of the State Board of Health of the comparative grades of each monthly Bulletin.

5. Considerations of Value: In grading the special material in the Bulletins, the following considerations should govern:

(a) Subject Matter: This must be pertinent to North Carolina conditions, and must be in the line of purpose for which the special bureau contributing the matter exists.

(b) Structure and Style: This should be simple, clear, forceful, and of correct composition. Originality in both conception and expression should be noted and awarded.

(c) Objective: In the grading of all material, the two questions, What was the target aimed at? and How near does the article reach it? should have great influence in determining value.

6. Public Recognition: The Secretary will publish the grades given each special Bulletin, with an explanatory note.

7. Reward for Merit: The executive officer whose special Bulletin received the highest grade shall be given a prize of \$50.

THE SIGNIFICANCE OF VERTIGO.

In taking clinical histories, it is found that one patient out of every five or six, will complain of having had at some time in the course of the disease for which he is asking treatment, attacks of vertigo. In intensity and in character, the vertiges will vary within wide limits. Sensations of falling—falling through the bed for instance; the feeling that objects are whirling around the patient; and that the patient is himself whirling around external objects; and the feeling that the floor upon which the patient is walking is giving way, are the more common forms of the sufferings complained of by the patient.

The attack may last but for a second in one case, and in another case the dizziness may be continuous. In one instance the sensation of loss of equilibrium, may amount to only an annoyance to the patient, and in another instance it may greatly frighten and alarm the patient. Oftentimes it is the principle suffering, for

which treatment is sought, and again it only comes to the physician's attention, as an after-thought symptom on the part of the patient. In one case vomiting may precede the vertiginous attack, while in another case the sensation of dizziness seems to have caused the vomiting.

Singularly enough, the intensity of the vertigo may not be at all indicative of the curability, or of the incurability of the systemic or structural disease, of which the vertigo is symptomatic.

It may be an unsettled question as to whether there can be a vertigo, that is entirely outside of, and uninfluenced by the functions of the semi-circular canals, but the first thought that comes to the clinician when vertigo is mentioned is, that something is demoralizing the vestibular function. But the physician is aware of the fortunate fact, that Meniere's disease is comparatively, of infrequent occurrence; and moreover, the probability or improbability of the presence of Meniere's disease, can usually be very quickly and safely determined. For this reason, Meniere's disease does not add much hazard to diagnosis.

Always it is the function of science to specialize and particularize, rather than to generalize. Hence it is the aim of diagnostic science to ultimately get away from the so-called "functional" diseases. Obviously to make such a diagnosis, is a begging of the question. However, to put it in grossly unscientific language, vertigo is sometimes not an easy diagnostic nut to crack.

If the physician knows of a hemorrhage from any part of the body of the patient, then the vertigo is symptomatic of cerebral anaemia; the vertigo being secondary, however, to deficient blood supply to the vestibulum. On the other hand a patient may have exactly the same vertigo, and too, because of deficient blood supply to the vestibulum, and yet the cerebral anaemia be caused not by hemorrhage, but be the outcome of a bradycardia, produced by auricular fibrillation. In a third case there may be vertigo of the same character and intensity, and presumably due to cerebral anaemia, but which anaemia has been produced by fright. Here diagnostic exactness falls down, or at any rate is obliged to fall back upon a more or less undefinable pathology, to account for the lack of blood supply to the equilibrium maintaining centers. In each of these cases the centers are doubtless suffering from a lack of

blood supply. So much has been made out.

In acute infectious diseases, notably in infective encephalitis, vertigo is a common symptom. Seemingly in such cases, there must be a cerebral congestion. The antithesis of anaemia, one would think; and still the same vertigo! To say that toxic products circulating in the fluids of the body are responsible for the vertigo, or that febrile temperature produces it, does not explain very much.

The country dweller goes into town for the day. The incessant endless passing to and fro of people and vehicles, make him dizzy, and he goes back to his country home, sick with migraine, whatever migraine is. Car riding causes vertigo in some people, and boat riding in others; and it is purely physiologic for whirling one around to make one dizzy; and indeed the absence of dizziness under those conditions, points to some existing abnormal condition in the one so whirled. Impacted wax in the ears, will cause dizziness, and the near association with the internal ear, makes the vertigo seem like a matter-of-course symptom. Errors of refraction, produce the same dizziness, but herein, cause and effect are not so logically traceable.

If acidosis is a pathologic entity, then vertigo is a common symptom of acidosis. Neurasthenia is another easy diagnosis, and whether the name means much or little, the sensations of dizziness are some of the most distressing symptoms of that discouraging disease.

Outside of all the definable conditions, in which vertigo occurs, it must be said that there are many attacks of vertigo that are unexplainable, only as they are looked upon as being symptomatic of purely functional derangements.

AMERICAN MEDICAL WORK IN CHINA.

The recent annual report of Rockefeller Foundation on its medical work in China shows the expenditure in the past year in China of \$2,131,588.00 of which the major part was in the construction work on the great Peking Union Medical College which will soon be completed and ready for opening to students. A number of the Chinese physicians who are expected to take a part in the school and hospital work of the college are in America studying in some of our leading schools. This work being done in the Orient by the

Foundation means much for the future development of that section of the world and is a fitting complement to the recent announcement of the organization in the same city of China of the Sino-American Bank with a capital of ten million dollars, equally distributed between Chinese and American capitalists. Hand in hand American science and finance will properly go in developing in measure at least, the Orient according to American ideals; but in the meantime may it not be possible, that many of our concepts will also be modified by more active world contact?

SCIENCE AND THE COMFORT OF THE PATIENT.

Anyone who would attempt to depreciate scientific research in the realms of pharmacology would be classified as an idiot and a dolt. We have frequently ascribed wonderful therapeutic powers to certain drugs in the past, and have had to revise our opinion in that line equally. And, no doubt, a great deal of unnecessary—if not harmful—drugging has resulted from our hazy unproven ideas. It would be more than foolish to give a coal tar preparation and expect to get a quickening of the pulse rate. And no one does it. But we have made errors equally ludicrous.

And it is hard to give up the old ideas. Quite as hard as it was to replace the smelly, infectious, but comfortable hot poultice of bread and milk, or meal or bran with the cleaner and equally effective hot water bottle.

Now we are confronted with some extensive and very carefully performed research work by skilled investigators which proves that we have been laboring under a misapprehension, if we have imagined that the temperature of the intra-abdominal organs has been affected by hot water baths or ice bags applied to the abdomen.

Stengel and Hopkins (1) and Ludin (2) have found that the intragastric temperature is not increased at all by the application of hot water bottles to the abdomen for forty-five minutes, and only slight rises in temperature followed the prolongation of the process for three hours. Only slight lowering of the temperature with ice bags could be accomplished.

The question arises as to just what results the doctor expects to produce by the application of hot water bottles. In the vast majority of cases, it is probable that he is merely attempting to give the pa-

tient comfort, and that he does not expect any therapeutic result other than this purely symptomatic one. It has been pretty generally agreed that the hot water bath and ice bag are quite probably effective through a reflex syndrome, and that either method is equally efficacious; the one giving the greater comfort to the patient being usually employed.

Hot water bottles should not be abandoned as a treatment for abdominal pain. It is quite well to know that they are not causing any change in peristalsis but sufficient excuse for their employment can be found in the fact that they do make the patient feel better.

(1) Stengel and Hopkins. *Am. Jour. Med. Sc.* CLIII-101.

(2) Ludin: *Zeitschr d. ges. Exp. Med.* VII-68.

NEW YORK STATE LOSES A VALUABLE OFFICIAL.

Dr. Albert H. Garvin for twelve years past superintendent New York State Sanitarium for Tuberculosis at Ray Brook, N. Y., has resigned to accept a similar position in an institution for the care of early cases of tuberculosis near Detroit, Mich., where his salary will be \$10,000.00 a year and maintenance. Certainly with the growing disposition for private institutions to reach out and take over from public institutions the choicest men of the profession at advanced salaries must in time have an influence in causing substantial increases in salaries paid officers of state institutions. Here in North Carolina we have the spectacle presented of more than one ten thousand dollar-a-year doctor quietly pursuing the even tenor of his way in caring for the weighty responsibilities of state institutions at less than a third of what a proper consideration of his duties, his abilities, the needs of himself and family, should make a proper compensation. How long will a rich state continue to expect competent medical men to assume positions of vast responsibility for a monthly wage equal to what a railway engineer gets for running his train?

Mecklenburg and Harnett Counties of North Carolina, at the December meeting of their commissioners decided to establish whole-time County Health Officers beginning the first of the year. Such officers will be provided for upon the co-operative plan of public health work whereby a portion of the expense is borne

by the county and a part by the state with incidental appropriations from the International Sanitary Commissions for specific purpose. Certainly if a North Carolina county is to have health department, and a live up-to-date one, it should get in line in the making of one that can stand the acid-test of comparison and checking up with other counties. Only such county health departments should be prompted hereafter, the time having arrived when a county undertaking this work can not afford to have any but the best, and with all the advanced plans put in effective operation along the various lines of modern public health work.

THE BUNCOMBE COUNTY MEDICAL SOCIETY HOST TO THE SOUTHERN MEDICAL ASSOCIATION.

That Asheville has a fine medical profession, greatly skilled in the various departments of modern medicine and equal in every way to the very best our profession affords, is well and widely known; but the capacity of the doctors of that most attractive little city in the line of host to the second largest medical association in America was finely demonstrated last month in the meeting of the Southern Medical Association and the thoroughly delightful way in which everybody was cared for. With the generally crowded condition of hotels everywhere the entertaining of a big medical meeting is always a problem, doctors going away for a vacation, wanting the best, and willing to pay for it. Asheville doctors, however, were fully organized with the splendid citizenry behind them, the handsome big hotels filled up promptly and then hundreds of luxuriously appointed homes were opened for the overflow. As a result everyone went away praising Asheville and its fine management of what has become a big problem in modern life. We congratulate the Asheville doctors, and assure them in no city where we have attended medical society sessions were the arrangements better made and carried out to the comfort and pleasure of the guests than in their charming City of the Hills.

EDITORIAL NEWS ITEMS

Parran Jarboe, M. D., F. A. C. S., 113 Dixie Bldg., Greensboro wishes to announce to the profession that after November 1st, 1919, will confine his practice exclusively to General Surgery and Consultations.

At a recent meeting of the Buncombe County Medical Society the following officers were elected:

Dr. C. W. D. Colby, president; Dr. J. M. Lynch, vice-president; Dr. J. W. Huston, secretary and treasurer.

The delegates to the State Society were: Drs. E. B. Glenn, and D. E. Sevier.

The Board of Censors consists of Drs. C. L. Minor, C. W. Reynolds and W. C. Brownson.

The Iredell-Alexander County Medical Society met December 1st, 1919, and elected the following officers:

Dr. A. E. Bell, Mooresville, N. C., president; Dr. L. V. Cloninger, Statesville, N. C., vice-president; Dr. J. E. McLaughlin, Statesville, N. C., secretary-treasurer.

Delegate to the State Medical Society, Dr. M. R. Adams, Statesville, N. C.

At the regular monthly meeting of the Guilford County Medical Society held in Greensboro, Thursday, December 4th, 1919, the following officers and delegates for the year 1920 were elected:

President, Dr. C. W. Banner, Greensboro; Vice-President, Dr. R. A. Schoonover, Greensboro; Secretary-Treasurer, Dr. F. J. Pate, Greensboro.

Delegates to State Society: Dr. J. T. J. Battle, Greensboro; Dr. J. W. Long, Greensboro; Dr. J. T. Burrus, High Point.

"Pneumonia Prevention and Treatment." is the title of a very concise brochure issued by the Mulford Laboratories.

It deals particularly with the production and testing of Antipneumococcic Serum, Pneumo-Strep-Serum and Pneumonia Serobacterin Mixed.

Special attention is given to analysis and illustration of the apparatus for intravenous injection, which simplifies the administration to such an extent that an intravenous injection may be safely given without any previous experience.

A postal card will obtain this very valuable addition to pneumonia literature, which ought to be on the desk of every physician.

BOOK NOTICES

Transactions of the College of Physicians of Philadelphia, third series, volume the fourteenth. Philadelphia. Printed for the College.

"Carita's New World," by Lucy M. Blanchard, author of "Carita and How She Became a Patriotic American," etc. Illustrated by John Goss. Price \$1.50. The Page Company, Boston, Mass.

Carita, whose American name was Margaret and the outstanding character of the book, was born in quaint old Mexico City and lived there until she was about fifteen years of age. On account of unsettled conditions of the country and the danger of being killed and robbed by bandits Carita and her mother came to the United States to live. Carita has a great touch of originality and a novelty in its picturesque setting in old Mexico, little known except to a traveled few. The descriptions of points of interest are woven into the story in a chatty and natural way.

The book contains 339 pages with many illustrations. It will be especially interesting to the young people with imaginative minds.

"Only Henrietta," by Lela Horn Richards, author of "Blue Bonnett-Debutante," "Blue Bonnet of the Seven Stars," etc., illustrated by Florence Gardiner. The Page Co., Boston, Mass. Price \$1.50.

A rare and gracious picture of the unfolding of life for the young girl, told with a delicate sympathy and understanding that must touch alike the hearts of young and old.

This book is nicely gotten up. It has three hundred and ninety-two pages with several very beautiful illustrations. A novel that will hold the interest and admiration of its readers from start to finish.

Tachycardia and Intermittent Heart.

In tachycardia whether proceeding from exophthalmic goiter or from other causes, or in intermittent heart arising from the excessive use of tea, coffee, or alcohol, Cactina Pillets will be found of exceptional value. They afford a safe and reliable means of overcoming excitability and irregularity of the heart's action. One or two Pillets every two or three hours will exert the desired effect by improving the nutrition and tone of the cardiac muscle.

Miscellaneous.

The Use of "Antigens" in Diagnosis by the Wassermann Reaction: The Necessity for Further Investigation.—Browning and Kenneway (The London Lancet) say that they approve the value of adopting a standard antigen in making the Wassermann reaction, the authors point out the limitations of those in common use, which should preclude their adoption as "standard."

The property of a syphilitic antigen is that when mixed with syphilitic serum (heated to 56 deg. C) in suitable proportion and added to fresh guinea-pig serum, it deprives the serum of its hemolytic power.

Attention is called to the evolution of knowledge as to the syphilitic antigen. It is desirable that the quantitative difference between a negative and a positive serum should be as great as possible, as measured by the excess of the amount of complement which the serum-antigen will inactivate, because this is the only index of positiveness which exists. Examination shows that alcoholic heart extracts possess this quality to an outstanding degree, therefore human heart extract has been employed as syphilitic antigen for routine purposes. Other workers have used a similar extract with the addition of cholesterol. Some laboratory workers found that the heart "lipoids" plus cholesterol and certain normal sera led to a great inactivation of complement. They continued to use liver-lecithin, feeling that the smaller complement fixation was compensated by the fact that in a series used with a parallel series plus cholesterol, if a given serum caused more complement inactivation, it was an indication of its syphilitic character.

The crude heart extracts have a tendency to cause considerable complement fixation with non-syphilitic sera. On the other hand, such an antigen as that first advocated by McIntosh and Fildes has found much favor. Its popularity is evidenced by the fact that of the four methods of performing the test recommended by the Special Committee from the Medical Research Committee, three employ this antigen. The Committee states: "Of the various extracts which have been recommended at one time or another, that prepared from heart and reinforced with cholesterol, as recommended by McIntosh and Fildes, will be found simple to

prepare and as satisfactory as any in use at the present moment."

Walker and Swift from results of tests believe that the antigenic property of cholesterol-heart extracts is especially evident when testing sera from recently treated cases of syphilis.

The authors have carried out a series of parallel tests employing liver-lecithin plus cholesterol, and McIntosh and Fildes' heart extract plus cholesterol. The results confirm their earlier observation that liver-lecithin plus cholesterol antigen with many positive sera gives a smaller amount of complement fixation than other antigens; the liver-lecithin-cholesterol antigen leads to greater complement fixation than does the heart-cholesterol antigen.

Not only may one antigen differ from another as regards optimum concentration, but the amount of serum necessary to elicit maximum complement fixation may vary.

Results have led to adoption of the following routine in Wassermann tests: For each serum, two series of three tubes are set up: (a) containing liver-lecithin-cholesterol (1:8 turbid emulsion) 0.3 cc. plus 0.025 cc. patient's heated serum; and (b) heart extract plus cholesterol (1:30 rapidly mixed emulsion) 0.5 cc. plus 0.05 cc. patient's heated serum along with increasing amounts of complement in each series.

Clearing up the present uncertainty is urged by concentration on study of (1) cases of syphilis with previous positive reaction and present reaction nearly extinguished; (2) untreated cases from congenital syphilitic families; and (3) cases where suspicious or positive reactions have been obtained.

For certainty in diagnosis it is advisable always to use both antigens. If only one is used, all sera should be preserved by freezing that the test may be repeated with the other antigen.

Prognostic Significance of the Streptococcus in the Sputum of Influenza Patients.—Lochelougue during the last half of 1918 had occasion to examine many sputa in which the following technique was employed. The first stage had to do with the use of Ziehl's method as preliminary to exclude the possibility of an awakening of latent phthisis. These examinations gave results uniformly negative. Next came a gram stain to exclude other bacteria. In the third place the use of Unna's blue stain gave data of importance as to cytology. The specimens were

received without any data of explanation, and the above procedures were carried out as a matter of routine. The records of laboratory finds are often without the accompanying clinical data. The finds in the sputa show in general streptococci in chains. The author wonders if this arrangement in chains is not responsible for or indicative of virulence. The chains are associated with monococci and diplococci, and the greater the virulence of the infection the greater the proportion of chains. —*Le Progres Medical*.

War Leprosy in France.—Perrin and Brac state that Marseilles is the city where one would expect to find exotic cases of this affection on account of its geographical and commercial situation. But aside from the imported case this terrain also represents an old focus of native leprosy. Hence it might not always be possible to distinguish at first between the imported and autochthonous forms. Advanced cases with tuberculous or mixed leprosy occurring in men known to have come from leprous foci need not be considered here, for we are concerned chiefly with abortive and nervous types. Many of these exotic subjects passed through Marseilles as a clearing point to be repatriated, and the mildness of the cases was remarkable, the general health being excellent and the symptoms few and slight. This could hardly have been otherwise when the men had been originally recruited as healthy soldiers from the colonial possessions of France. All of the cases described and illustrated appear to have been in negroes and Tonkinese. —*La Presse Medicale*.

Remarks on Chest Wounds.—Nixon (*British Medical Journal*) says that the general considerations from the surgeon's point of view of chest wounds are, first to save life; second, to restore function as completely and as quickly as possible. All wounds of the parietes and thoracic contents should receive the surgical attention they require at the earliest possible moment. Hemorrhage must be arrested and every possible step taken to avoid infection. No fluid, whether blood serum or pus, must be allowed to collect in the chest. Early and frequent aspiration must be resorted to whether thoracotomy has been performed or not. Any fluid in the chest is dangerous from two points of view: (a) It is a nidus for sepsis. (b) It interferes with the expansion not only of the injured but also of the uninjured lung,

setting up conditions favorable to the development and spread of bronchitis, broncho-pneumonia and lobar pneumonia. Foreign bodies, clothing and bone should be removed whenever possible. They are dangerous not only from the point of view of immediate sepsis, but from that of subsequent interstitial fibrosis. Resection and open drainage, as formerly practiced for empyema, is an unsatisfactory operation, and is shown by experience to be rarely necessary if the early treatment according to modern methods is not neglected.

Spasmodic Stricture of the Urethra.—Jones (*Glasgow Medical Journal*) illustrates the danger of informing patients as to the nature of their illness by a report of the following case: A married man, 46 years old, confined to bed with heart disease sent a sample of urine for examination. This, which contained a considerable amount of albumin was abundantly charged with spermatozoa. The patient was informed of this fact and was asked to send another sample after the lapse of some time. When the doctor next saw the patient, the patient stated that he had been thinking over the circumstances and that he could not account for what appeared to him such an unusual occurrence. Within a few days the doctor received an urgent call to come to the patient. On arriving there he was informed that the patient was unable to pass water and was in considerable distress. His distress appeared to be more mental than physical. As there did not appear to be much urine in the bladder and as there appeared to be a good deal in a chamber at the bedside, the doctor assured the patient that it was only a nervous spasm and would soon pass off, and that he would pass a catheter later. In about four hours the patient insisted that he could not wait, but before medical assistance could be obtained he voluntarily emptied his bladder and since then has not had any further trouble, and is able to pass urine voluntarily.

"For all indefinite aches and pains Tongaline is rarely given without the most beneficial results."

"Tongaline is always efficient for the relief of pain resulting from excess of uric acid."

"Tongaline promptly rids the system of any and all sorts of poison, making it an ideal eliminant."

Observations on the Sugar of the Blood and the Sugar of the Urine in Varying Conditions of Health.—McCay, in *The Indian Journal of Medical Research*, writes:

Section 1. This section deals with the sugar of the blood in Bengalis.

The method of estimating the sugar in the blood finally adopted, was a modification of Schaffer's method, which, stated briefly, is as follows:

A measured quantity of blood (5 c.c.) is added to 25 c. c. water and brought to boiling point, a few drops of acetic acid, 5 c. c. Merck's dialysed iron, and 0.2 gm. of powdered sodium sulphate are added and the mixture well shaken to ensure complete precipitation of all proteins. The mixture is filtered through muslin, lined with filter paper. An aliquot part 21 c. c. (equals 3 c. c. blood) of the clear filtrate is boiled with an equal quantity of Fehling-Allin solution. The cuprous oxide formed is separated by centrifuging and the amount determined by titration with N/100 potassium permanganate solution according to Bertrand's method.

The conclusions arrived at were briefly as follows:

(1) The average percentage of sugar in the blood of Bengalis is 0.13 per cent., whereas the percentage usually given for Europeans is 0.08 per cent.

(2) This high sugar content is probably due to excess of carbohydrates in the diet, since it varies from 0.125 per cent. in the poorly-fed working classes to 0.15 per cent. in the fat over-fed indolent classes.

(3) In normal individuals who show no tendency to glycosuria, the administration of glucose, even in considerable quantities, has little or no effect in raising the sugar content of the blood or in causing glycosuria; whereas the reverse holds for the fat indolent classes.

Section 2. This section deals with the sugar of the urine in Bengalis, and the relationships between the sugar of the blood and urine.

The new methods used in this investigation were:

1. The application of Schaffer's method to the urine, to determine the percentage of sugar in normal cases giving a doubtful reaction with Fehling's solution.

2. The use of inoculations with *bacillus coli communis* to prove the presence

of sugar in normal urine.

The conclusions arrived at are as follows:

1. The threshold stimulus of the kidney for sugar excretion varies widely in different individuals and in the same individual under different circumstances. Glycosurics are met with in whom—

(i) the threshold is high—usually the condition seen in the fat, over-fed classes:

(ii) the threshold is low—as in

(a) the later stages of (i);

(b) those who have lost the power of storing sugar, oxidising sugar, and of converting sugar into fat;

(c) those who present an excessive permeability of the kidney to sugar as a result of oxaluria, gout, stone.

2. The limits of the normal variations of the sugar of the urine of Bengalis are from 0.015 per cent. to 0.15 per cent., the average being 0.065 per cent.

3. No parallelism or arithmetic proportion exists between the concentration of the sugar of the blood and that of the urine in any of the following conditions:

(i) Normal health.

(ii) A-glycosuric diabetes.

(iii) Varying degrees of glycosuria in different individuals.

(iv) Varying degrees of glycosuria in the same individual.

4. The ingestion of glucose is always followed by an increase in the sugar of the urine, whether the concentration of the sugar of the blood increases or not, i. e., in the healthy, potential diabetics, and diabetics.

5. Kidney disease may prevent glycosuria even when very marked hyperglycaemia is present—up to 0.86 per cent. hyperglycaemia occurred in one of our cases without glycosuria.

Section 3. This section deals with the "Onset and March of Glycosuria," and the cause of the prevalence of diabetes in India.

The significance of varying quantities of fat in the blood is first of all dealt with.

The method used for estimation of fat in the blood was as follows:

The solid residue obtained on filtering, after boiling and adding dialysed iron and sodium sulphate, is thoroughly extracted with ether. The ethereal extract is evaporated and the residue dried and weighed. The fat is thus expressed as percentages of ethereal extract.

By this method it was found that the normal fat of the blood averages 0.069 per cent.

In cases where glycosuria is present the

average fat percentage is much higher—up to 0.36 per cent.

A great increase in the percentage of fat is uniformly shown by all potential glycosurics after the ingestion of glucose and accompanies the rise of sugar content of the blood.

After ingestion of lactose, on the contrary, there is no rise in the sugar or fat content of the blood. This points to a higher assimilation limit for lactose than for glucose in diabetes. Hence the importance of milk as a food for diabetics.

The author then deals with the chemical changes that occur in the blood before the onset of glycosuria. There may be briefly expressed as follows:

(a) A general increase in the sugar concentration of the blood accompanied by a raised threshold stimulus of the kidney for sugar excretion.

(b) The total fats of the blood are increased.

(c) Marked lipaemia with deposition of fat in the tissues follows on the ingestion of glucose.

The cause of the obesity in potential diabetics would therefore appear to be the occurrence of hyperglycaemia. This, in accordance with Allen's conception, would mean that while the dextrose amboceptors of the internal secretion of the pancreas are deficient the fat amboceptors are normal or increased—excessive physiological activity.

The cause of the wasting seen in the severe type of cases must on the other hand be referred to pathological processes—deficiency of fat amboceptors and loss of power on the part of the tissues to convert sugar into fat, or breaking down of fat to provide energy for body requirements, which is no longer supplied in sufficient quantity by oxidation of sugar.

The author adduces evidence—the presence of sugar in normal urine, and the increased reducing power that invariably follows ingestion of sugar or carbohydrate feeding, even in perfectly healthy individuals—to show that the human organism is inherently diabetic. There is always a tendency to hyperglycaemia and the pancreas is never quite able to provide a sufficient number of amboceptors to deal with even moderate amounts of carbohydrate.

Overfeeding with carbohydrates is often sufficient in itself to account for the onset of hyperglycaemia, lipaemia, obesity and glycosuria, but in a large proportion of cases, such as hereditary influences and the evil effects of an excessive

carbohydrate diet on the gastro-intestinal tract. Evidence is adduced to show that there is a close relationship between the prevailing diet of the Hindu, and deficiency of the hydrochloric acid in the gastric juice, which in its turn leads to fermentative dyspepsia, oxaluria, and gastro-intestinal catarrh. This catarrh may extend from the duodenum to the pancreas, leading to depressed pancreatic activity, a weak external secretion and deficiency of amboceptors.

The author's conclusions as to the cause of the prevalence of diabetes in India are as follows:

1. In Section 1 we proved that the percentage of sugar in the blood of Bengalis is high; that it is higher in the fat, flabby, indolent classes than in the working classes or in those who are lean and energetic.

We also showed that the fat, flabby type of individual was easily made hyperglycaemic and glycosuric; and that the hyperglycaemia, following on glucose ingestion, lasts longer and reaches a higher level than in the lean, the energetic, or in the working classes.

Sugar tolerance was, therefore, shown to be poor in the over carbohydrate-fed, indolent, fat, flabby individual. This is the class amongst whom glycosuria is so prevalent.

2. In Section 2 we showed that the threshold stimulus of the kidney for sugar excretion varies widely in different individuals, and in the same individual under different conditions. Also, we found that the ingestion of glucose, or even carbohydrate food, is always followed by an increase in the sugar excreted in the urine. This tendency to glycosuria was present in even the most normal and healthy of individuals, which proves that the human system is incapable of completely utilizing carbohydrates, and that, therefore, even normal people are more or less diabetic.

The tendency to diabetes is always present.

3. It has been proved beyond all shadow of doubt that, when the deficiency of the pancreatic internal secretion falls below a certain standard, the tolerance to carbohydrates decreases, and that carbohydrates, given in excess of the quantity the tissues can deal with effectively, tend to choke carbohydrate combustion; so that the patient gradually loses what power of oxidation he may have possessed; thus, an intermittent hyperglycaemia and glycosuria may become permanent, and a

diabetes levis progress into a diabetes gravis.

Applying these principles to the so-called normal Hindu of the fat, flabby type, who, even in the most favorable circumstances, is unable to utilize completely a small carbohydrate meal, we can easily understand how the excessive carbohydrate food—often fatally augmented by sweetmeats of all kinds—will react in those of an indolent disposition and who lead a sedentary life. The fires of tissue metabolism will gradually become choked and permanent hyperglycaemia and glycosuria established.

4. Although this in itself is probably sufficient to account for the onset of glycosuria, in addition many other assisting influences are at work.

Of these, inherited tendencies and the ill-effects of prolonged carbohydrate feeding on the gastro-intestinal tract are probably the most important.

In Section 1 our tables show the very large proportion of cases of glycosurics or potential glycosurics who gave a family history of diabetes. A great many of the diabetics we have treated and studied during the last four years give a diabetic family history. The influence of hereditary tendency is so evident and so well recognised that it is not necessary to labor the point.

In Section 3 we have brought forward strong evidence to show that excessive carbohydrate diet, besides tending to decrease the oxidising power of the tissues in a direct manner, acts also indirectly by lessening the secretion of the hydrochloric acid of the gastric juice. This leads to fermentative dyspepsia, gastro-intestinal catarrh, and probably pancreatitis. Whether it be a functional derangement or an atrophy following on chronic inflammatory changes, the pancreatic activity becomes depressed, and, accepting the dextrose amboceptor theory, the oxidising power of the tissues becomes lowered. The potential glycosuric in this way quickly comes under the influence of the ill-effects of carbohydrate overfeeding, and hyperglycaemia and glycosuria are rapidly established.

Specific Treatment in Influenzal Pneumonia and Other Acute Infections.—Wynn, in *The London Practitioner*, gives the result of injecting a mixed vaccine of pneumococci, streptococci and influenza bacilli in 107 consecutive hospital patients during the first five days of the illness:

The doses given were as follows:

Adult man, 80 to 100 million of each.

Adult woman, 60 to 80 million of each.

Child 12 to 14 years, 40 to 50 million of each.

Child 2 to 3 years, 10 to 20 million each.

Patients inoculated during the first day

—These numbered 28.

71.4 per cent had a normal temperature within 24 hours and all recovered.

Patients inoculated during the second day—The number in this group was 23.

47.8 per cent obtained a normal temperature within 24 hours of the injection. There was one death.

Patients injected on the third day—Twenty-two cases.

In 50 per cent the temperature fell to normal within 24 hours. There were two deaths.

Patients injected on the fourth day—Twenty cases.

In only 30 per cent did the temperature fall to normal within 24 hours. Half of the patients required a second injection. There were five deaths.

Patients injected on the fifth day—Fourteen cases.

In 35.7 per cent the temperature reached normal within 24 hours. There were ten deaths.

The writer believes it possible to abort cerebrospinal fever in a similar manner, by the use of vaccines at an early stage, and quotes two successful cases.

It is remarkable that there was no clinical evidence of a negative (apophylactic) phase.

Restorvin. No physician can fail to recognize in this combination the **Ideal Tonic and Reconstructive**. Each ingredient is the type of its class. **Phosphoric Acid**—Tissue Builder and Nerve Restorer. **Hydrastis**—Tonic to Mucous Membranes. **Albuminate of Iron**—Regenerator of Red Blood Cell. **Calisaya**—Antimalarial, Tonic and Febrifuge. **Glycerine**—Antiferment and Emmollient. **Sherby Wine**—Stimulant and Tonic. The whole combined to form a delicate, appetizing cordial, which agrees with even the weakest and most delicate stomachs.

Alternation of Generations and Its Bearing Upon Cancer.—Beard, in *The Dublin Journal of Medical Science*, discusses an article by Crofton dealing with the former's theory of the alternation of generations and the Abderhalden pregnancy reactions. Beard contends that Crofton's article is one from which it

would be impossible for any opponent of his embryological conclusions as to cancer and the role of pancreatic ferments in its treatment to cite anything adverse to any statements of his ever printed with reference to cancer and its treatment. In his opinion, Abderhalden's work and conclusions might be quoted as supporting from the purely stereochemical side his embryological work, and later his stereochemical conclusions upon the problems of cancer. Crofton holds that Beard has been led astray to advocate in the treatment of cancer the pancreatic ferments, instead of the internal secretion of the pancreas gland. Beard's opinion of the "internal secretion" of the pancreas gland is that at present it stands in exactly the same position as the gland itself did prior to Corvisart's researches in 1857, when physiologists and physicians alike held that it had no digestive functions whatever. It has never been demonstrated by anyone that the "internal secretion" of the pancreas gland will perform any physiological work at all. Beard still insists that trypsin and amlopsin scientifically administered are curative in cancer. In disproof of this the many failures may not be referred to, for as the late Professor D. J. Cunningham once remarked, "Negative results never prove anything at all in science." The explanation of the many failures is easy. Some, even many, cases failed because the treatment was undertaken too late, for it has never been Beard's view that trypsin and amylöpsin, powerful though they might be, could be considered a useful alternative to Extreme Uction. Other cases failed because the preparations used were, to say the least, not suitable for the treatment. The author is now convinced that another cause of failure is to be found in the mode of giving the injections hypodermically or intramuscularly. It has always been his own opinion that the proper manner of giving the injections is intravenously as recently advocated, with success claimed in the first case tried by Dr. W. W. McDuffie of New York. As to the use of "internal secretion" versus trypsin and amylöpsin, this matter could be easily set at rest. But the onus of making the test is upon Dr. Crofton, not upon Beard, who is quite skeptical regarding any influence of "internal secretion" upon cancer cells. Beard summarizes his present scientific position thus: In all the years that have elapsed since his Liverpool lecture of January 20, 1905, the author says, nothing whatever has occurred to alter in the least

his convictions regarding the nature and treatment of cancer.

The Climacteric of Life.—Guthrie Rankin submits a clinical survey which shows the importance of the climacteric period of life, not only in women, but in both sexes. The history of every life is a gradual ascent from the time of birth till its fastigium is reached, and from that point one of decline until it finds its termination in death.

The climacteric period, which coincides with life's full maturity, is the time of special liability to the development of disease, hereditary or otherwise. It is well recognized in women, but it is not so generally appreciated that men go through a similar readjustment of tissues, though probably at a later age. Since at this time the protective powers of the body are less active, acute illness is attended with more than average risk.

The immediate counterpart in man of the ovarian changes which take place at this time in women is probably to be found in the structural alterations which become established in the prostate gland. It is not surprising that growths of malignant type so often date their inception from this period of unstable tissue life.

Most interest, however, attaches to the chronic ailments met with at this period of life; and the author selects three that are commonly met with in men and three more unusually encountered in women. Although each ailment may be considered as an entity, they are each related to the other and none is really self-contained.

Arteriosclerosis, interstitial nephritis, and diabetes form a group frequently seen in men between fifty-five and sixty-three. Each may be regarded as evidence of a breach of tissue integrity, and in all three cases the common causative antecedent is continued strain—domestic trials, financial worries, emotional storms and mental anxieties.

The stress of carrying on falls primarily upon the nervous centers, the result being neurasthenia. More often than not these ailments overlap one another, and all three are frequently seen together, and their close association makes the onset of one almost certainly the prelude of the others.

The indications as to preventive treatment are simple: the strain of life must be ruthlessly curtailed; work must be lessened and leisure cultivated; the diet must be adjusted to the necessities of the condition and the capacity of the dam-

aged organs. A weekly grain of calomel will provide for free action of the liver, and periodical small doses of iodide and nitrate of sodium with arsenic will help to keep the blood tension low, and possibly aid in delaying the thickening of arterial walls.

The causative influence in all three conditions is probably a toxemia, by which metabolism is more or less seriously interfered with.

Treatment, therefore, should be directed toward combatting toxicemic intoxication. In colitis douches are sometimes useful, but they may create an undesirable reflex action upon a nervous system already touchy. Beta-naphthol, bromide of ammonium, and bismuth is a useful combination, to which may be added an occasional dose of calomel or podophyllin. A tablespoon of liquid paraffin should be taken before breakfast every morning.

The abdominal wall may be supported by wearing a suitable belt. In rheumatoid arthritis guaiacum is an efficient remedy and should be used in combination with sulphur. The usual treatment by bromides, strophanthus, thyroïdin and arsenic is indicated in cases of hyperthyroidism.

In both sexes, however, the success of treatment lies in convincing the patient that the years are beginning to tell their tale and that a new and more subdued plan of life must be adopted.—British Medical Journal.

Adventure Number Two—Doctor Young Doctor.—A short time after arriving, Young Doctor was called in to see a case which presented the features that we are accustomed to associate with appendicitis. There were pain first general and later localized to the right groin, nausea and vomiting, fever and the white count showed about 10,000 leucocytes. It looked like a clear case to Young Doctor but he was unwilling to assume responsibility. He called in Friend Consultant. Consultant could not come at the moment but would be free in about an hour. That suited young doctor very well for he had a call down the valley to attend to. He told Consultant then to come along when he could and that though he was sure of the diagnosis and thought that he ought to remove the appendix at once, he said no harm in waiting an hour or so. Young Doctor made his call and on returning he went first to the house of his patient. There he was told that the girl had been taken to the hospital. He

thought that he was really being treated better than he deserved. Here was an older man taking as much interest in his case as he took himself. It was mighty nice of Consultant, thought young Doctor, to go to all that trouble just to help him out. He arrived at the hospital and bustled in, enjoying in anticipation his first appendectomy for a fee, he asked for his patient and was told that she was doing nicely, thank you. Yes, Consultant had made the most of his opportunity and Patient was now coming out from under the anaesthetic.—Southern Medicine.

The medical department of Armour and Company has taken precautions among plant employes against a return of the "flu" epidemic in Chicago and other cities where the Armour plants are located.

All employes have been notified that without charge they may have the influenza vaccine administered according to the formula of Dr. E. C. Rosenow.

In addition to offering this vaccine free to employes, a general educational campaign along health lines and particularly with reference to the "flue" is being carried on among the workers in the plant.

Dr. Volney S. Cheney, medical director of Armour and Company, reports that the employes are taking an interest in the campaign and that as a result no serious recurrence of influenza is looked for among Armour workers.

Prophylaxis and Treatment of Influenza and Influential Pneumonia.

Dr. E. C. Rosenow, of the Mayo Clinic, has probably done more to determine the prophylactic value of vaccines in influenza than any other individual in the country. He reported on the use of a prophylactic vaccine last winter. There were 100,000 cases under observation, with 300,000 controls. He declared that the incidence of influenza was about three times as common and the death rate five times as high among the uninoculated as among the vaccinated persons.

Parke, Davis & Company's Influenza-Pneumonia Vaccine is prepared essentially in accordance with the original formula and method of Dr. Rosenow. It is administered in three injections, at intervals of six or seven days.

What about the treatment of influenza and influenzal pneumonia?

Physicians who employed Pneumonia Phylacogen last winter with the most striking results gave an initial injection of 16 minims immediately to every pa-

tient who came down with influenza. The second day the dose was increased to 32 minims, the third day to 48 minims, and so on until convalescence was established.

When pneumonia had already developed, 16 minims of Pneumonia Phylacogen was administered immediately. Twelve hours later 32 minims was injected, and the dose was gradually increased every twelve hours until the critical period had been passed.

Parke, Davis & Company, Detroit, will be pleased to send a copy of a new booklet, "Prophylaxis and Treatment of Influenza and Influenzal Pneumonia," to any physician requesting it.

Uric Acid Diseases.

Of the 50 odd grains of uric acid produced in the body each twenty-four hours, the liver destroys 18 grains, the kidneys 22, the muscles 3 or 4, and the remainder, about 6 grains passes out of the body in the urine. If foods are habitually taken which contain a considerable quantity of uric acid, it is stored up in the tissues, the system being unable to destroy it. The result is hardening of the arteries, enlargement and hardening of the liver, premature old age, the formation of calculi in the kidneys or bladder, neuralgias, nervous exhaustion and probably a greater variety of symptoms and disorders than those resulting from any other single cause.

Prevention of Military Epidemics of Cerebro-Spinal Fever.—Glover (Journal of Hygiene) draws the following conclusions from carefully conducted observations in dealing with the control of epidemic strains of meningococcus in seriously housed detachments of the British Army.

A high meningococcus carrier-rate in a military unit denotes dangerous overcrowding. The distance between beds is of paramount importance. Severe overcrowding, i. e., when beds are less than a foot apart, is usually accompanied by a carrier-rate of at least 20 per cent. This is the danger line indicated in the War Office Memorandum on Cerebro-Spinal Fever, March, 1917.

Carrier-rates of between ten and twenty per cent are unsatisfactory and imply overcrowding. They must be watched with suspicion, and the mobilization standard must be strictly enforced. A carrier-rate of this height will usually imply that the mobilization standard of forty square feet per man has been infringed,

and also that beds are less than a foot apart.

A carrier-rate of twenty per cent should be a signal for prompt action to abolish overcrowding, to improve ventilation, and least two and one-half feet. The "peace" standard of three feet between beds, and sixty square feet of floor space with six hundred cubic feet of air, would, of course, be more effective.

But the mobilization standard, introduced for a grave emergency, is the lowest possible concession to military necessity which can be allowed with safety.

Effects of the X-Rays on the Endocrine Glands in Particular the Adrenals.

—Zimmern (Bulletin de l'Académie de Médecine), states that while the seminiferous cells of the testes are very sensitive to the X-rays, even the interstitial cells in this organ are more sensitive than the cells of ordinary externally secreting glands. We have as yet only a vague conception of the relative sensitiveness of the gonads, thymus, pituitary, and adrenals, but undoubtedly the normal cells in these organs can, with sufficient doses of the X-rays, be profoundly influenced. Thus by treatment of the exposed rabbit thyroid effects similar to those of thyroidectomy were produced, and Regaud and Cremieux with large doses induced permanent absorption of the thymus. The sensitiveness of endocrine organs to the rays seems to be increased by disease of these organs, as illustrated in the effects obtained in thymic enlargement in children and in gigantism, in both of which affections some successful therapeutic results have been recorded. By exact adjustment of the rays over the adrenals in dogs, the author induced definite effects in these organs without harming the skin or kidneys. A marked cytolytic effect was produced in the zona fasciculata; a somewhat less effect in the zona reticulata, and little or no effect in the glomerular layer. In man, weaker doses were used in patients with adrenal overactivity manifested in permanent hypertension with its accompanying symptoms. Nearly always the procedure induced a reduction of blood pressure beginning in two or ten days and ranging in extent from twenty to forty millimetres of mercury. In two instances the systolic pressure was lowered by seventy and eighty millimetres, respectively. The duration of the reduction varied in different patients, but in some it persisted several months. X-ray

exposure of the adrenals deserves a place in the treatment of hypertension.

Diagnosis of Chronic Infections with the Gonococcus by the Complement Fixation Test.—Bowman and Taylor (Bulletin of the Canadian Army Medical Corps) says that the tests carried out at the General Canadian Laboratory, it is evident that in chronic gonorrhea positive results of the discharges by the examination of stained films are very difficult to obtain, chiefly because of the difficulty of obtaining gonococci either intra or extracellular.

In the discharges so few gonococci are present, or are so mixed with other bacteria that the Gram-negative diagnosis is almost impossible by freshly stained smears or cultures. In 1916 Muller and Oppenheim used as an antigen simply a suspension of gonococci in salt solution.

Teague and Turrey in 1907 emphasized the importance of using several strains of the gonococcus in preparing an antigen. Schwartz and Mc Neil emphasized it and stated that reaction never occurred in cases of anterior urethritis.

The authors have always used the anti-sheep hemolytic system. The first antigen prepared by Parke, Davis and Company, made from numerous strains, possessed excellent antigenic qualities. The titration should always be done before the actual fixation test.

The antigen is made isotonic by adding one part of 10 0/0 saline to nine parts of the antigen. This is then diluted again 1:10 with normal saline and titrated from anti-complementary properties.

When the test proper takes place the patient's serum should be used as soon as possible after taking the specimen. It should be free from cells and heated for one half an hour at 56 deg. C.

From the researches of the C. A. M. C. and others it can be definitely stated that the complement fixation test for gonorrhea is specific and must be relied on to confirm diagnosis, since cultural methods are not practical.

It should be borne in mind (1) that the test is never positive in localized anterior urethritis; (2) that the test is not usually positive before the sixth week of the disease; (3) that no cross fixation takes place with either syphilitic or tuberculous sera.

It is strongly recommended to keep tested and standardized antigens at hand on account of cultivating strains of gonococci.

Crisis Induction in the Treatment of Severe Influenza.—Renaud (Bulletin de l'Academie de Medecine) in cases of influenza with dangerous lung complications, gives an intravenous injection of 0.00025 gram of adrenalin, and twenty minutes later administers from twenty to forty mls of antipneumococcic serum prepared at the Institute Pasteur. This procedure induces an artificial but permanent crisis. The reaction seems rather severe, but the results as regards reduction of mortality justify the means. Within an hour after the injection, sometimes almost immediately, a marked chill and reduction of surface temperature are noted. The pulse goes up to 140 and becomes small, and the temperature rises to above 40 deg. C. Soon after, however, the pulse volume is restored, color and heat return to the skin, a profuse sweat occurs, and the patient experiences a pleasant sensation of well being. The temperature descends to normal by the following day, and remains practically normal permanently. The infectious process disappears, diuresis takes place, and congestive lung foci disappear. Since he began to apply this method the author has treated 120 patients suffering from influenza, of whom seventy had severe lung complications. All recovered. Comparison of the severe cases in which the procedure was applied with the milder ones, in which it was not, showed a definite shortening of the disease as a result of its employment. The simultaneous action of the adrenalin as a powerful excitant of the whole vasomotor system and of the serum as a foreign protein and vehicle of antibodies seems greatly to enhance their effects and renders the procedure superior to the use of colloids or bacterial products.

Suture of Gunshot Wounds.—Fraser (British Journal of Surgery) says that the following conclusions are presented: The number of cases is too small to enable us to form definite conclusions on points of detail, such as the value, absolute or relative, of antiseptics in the closure of infected wounds. We have been able to confirm fully the statement already made by French surgeons, that of the organisms commonly found in gunshot-wounds the hemolytic streptococcus is by far the most virulent. Although it has been found to be present only in about 15 per cent of the cultures, yet we believe that in the later stages of open wounds it is far more common. In the absence of this or-

ganism the vast majority of wounds can be closed and made to heal by first intention, in spite of the presence of other infections. So far we have never found that any antiseptic we have tried can be said to have any palpable effect on wounds infected by these organisms. They appear to penetrate so quickly into the tissues that it may be that no substance applied to the surface of the wound can be expected to have much effect. The discovery of a serum which would give efficient protection against this type of infection appears to me to be a matter of such importance that we venture to hope a concentrated effort may soon be organized on a sufficiently large scale with the object of solving this problem. While it is evident that with careful selection of cases and efficient operation immediate suture may be counted on to meet with a large measure of success and must be the method of choice for certain classes of wounds, such as those of the head and chest and those involving joints, yet we incline to the belief that for general use in the average wound delayed suture is safer and more certain in its results. During periods of active fighting, when cases cannot be retained for at least several days after operation, delayed suture is the only means of early closure at our disposal. This method has the advantage that the presence of virulent infection can be ascertained before the wound is closed by clinical evidence and microscopic examination. In this way, wounds with virulent infection, the majority of which if sutured would be failures, can be excluded from closure till later periods when the infection has been overcome. In the case of severe wounds and when the operator is in the least doubtful as to whether he has succeeded in efficiently removing dead and damaged tissue, delayed suture, as a general rule, should have the preference.

Early Administration Important.

Pneumonia Phylacogen was successfully employed last winter in many influenza cases. Early administration of this product, in most instances, resulted in marked improvement, cutting short the influenzal attack and preventing pneumonia.

A number of physicians in one large city employed Pneumonia Phylacogen as a routine measure in all cases of influenza with excellent results. One mil (Cc.) was administered subcutaneously on the first day, two mils on the second day, and three mils on the third day, the dosage

each day being gradually increased. The interval between doses was twenty-four hours, although in some cases the Phylacogen was administered every twelve hours, and in a few cases every eight hours.

Many physicians last winter carried one or two ten-mil vials of Pneumonia Phylacogen and employed it at the first indication of influenza, thus curbing the further progress of the disease and preventing pneumonia.

Information on the Untoward Results Following the Use of Diphtheria Toxin-Antitoxin Mixture for Immunizing Purposes.

During a threatened outbreak of diphtheria in Dallas, Texas, and vicinity, we supplied a quantity of diphtheria toxin-antitoxin mixture which was used in doses of one c. c. as an immunizing agent against diphtheria. It was subsequently reported that reactions occurred in a number of cases and that several deaths resulted.

A careful investigation of all the laboratory records of the lots as prepared by Dr. Frank Huntoon, our senior bacteriologist, who is recognized as one of the foremost bacteriologists in this country, proved conclusively that the products were carefully prepared and tested and conform in every respect with the governmental regulations of the Hygienic Laboratory. The tests on four guinea pigs required by Governmental regulations, were carried out before the products were released and conformed in every respect to the required standard. Also the sterility tests show that the toxin-antitoxin mixtures, on leaving our laboratories, met every condition prescribed by the government as being safe to employ. If these untoward results have been caused from diphtheria toxin in the mixtures employed, it is unexplainable because the product, as stated, conformed to all the tests prescribed.

The Hygienic Laboratory has sent a special representative to our laboratories, who has carefully gone over and checked up every step in the process of preparation of all mixtures made up to the present time, and the tests carried out, and has assured itself of all these facts. Both the Hygienic Laboratory and ourselves are making a careful investigation with the view of trying to determine the cause of the trouble in order that physicians using the toxin-antitoxin mixture as an immunizing agent in the future may have

the assurance that it is safe to employ.

It is important that you understand that the product used for active immunization is a mixture of diphtheria toxin and anti-toxin, a preparation which has recently come into prominence, in lieu of the Diphtheria Antitoxin which heretofore has always been employed for immunization. There is no similarity or connection between Diphtheria Antitoxin, which is an antidote and known to be perfectly harmless, and the mixture known as diphtheria toxin-antitoxin which contains a certain percentage of free diphtheria toxin upon which its active immunizing value depends.

We are giving you these facts in order that you may be thoroughly conversant with the situation and be able to make a satisfactory explanation. Be careful to point out that the product used was not Diphtheria Antitoxin used for passive immunization and curative treatment.

After being closed for two years due to government restrictions prohibiting visitors from the stock yards because of the war, Armour and Company's huge plant in the Chicago Stockyards is again open to visitors, an announcement from the company states.

This announcement will prove of interest to not only people who intend to visit Chicago some time this summer but to many others as well because, the announcement says, "preparations are being made by Armour and Company to open their other plants in various parts of the country so that a trip through a packing plant which is an educational one, will not just be limited to Chicagoans or visitors to Chicago, but to people in fifteen different parts of the United States, where Armour and Company have packing plants. Uniformed guides are in attendance to explain the various interesting things to be seen."

The Effects of Artificial Pneumothorax.—Pearson, in *The London Lancet*, relates his experience gained from twenty-one patients with severe pulmonary tuberculosis in whom he induced artificial pneumothorax, with the exception of one case that developed a spontaneous hydropneumothorax which he converted into a controlled pneumothorax. Eleven of these twenty-one cases are still alive, and all save two are enjoying good health and following their usual vocations. Nearly all of the ten who have died had their symptoms much alleviated and their lives

materially prolonged, in several instances by years, during which they enjoyed fairly good health and followed their occupations. In nearly every one of these twenty-one cases a situation had been reached which was quite hopeless apart from artificial pneumothorax who are still alive, the average time to date from the induction of the artificial pneumothorax amounts to 4 3-4 years, the longest time being 7 3-4 years and the shortest 2 1-2 years. In the earlier stages of the treatment, up to about eighteen months, the writer believes there is greater likelihood of making a mistake by injecting gas too seldom and taking the pressures too high rather than erring in the opposite directions. The author thinks that the abandonment of the injections in a successful case after too short a period is a far worse error than the continuance of refills too long. It is by no means an invariable rule for the pleural surfaces to become adherent after injections have been given up. Every endeavor should be made to keep the pneumothorax cavity a closed one. The only excuse for disregard of this rule is the presence of secondary microorganisms. In none of the writer's cases has this happened. Those cases which develop fluid (about 70 per cent) in the course of treatment need watching with special care. In discussing anatomical and physiological peculiarities which are met after the second year attention is called to the fact that in many cases the ribs come very close together by degrees, and in most the inflated side of the chest becomes partly filled by much displaced mediastinal and subdiaphragmatic organs. Occasionally the mobility of the mediastinum and its contents is largely lost and the heart becomes more or less anchored and displaced to the side with the compressed lung. But more frequently the displacement is altered in amount by a refill, even years after the starting of the pneumothorax. Considerable thickening of the pleura, especially the parietal pleura, occurs in a moderate number of patients by the third year. The practised hand can usually feel and gauge this at the time when the needle is inserted for a refill, and the golden rule must be observed of never giving any gas unless the appropriate oscillations are present. Among the physiological peculiarities belonging more especially to the late stages of treatment the low pressure readings are important, because before starting the refill of gas preparations for the low negative pressures must be made. These are

prone to occur especially when the intervals between refills are long—two or more months. Under such circumstances it is necessary to see that there are 7 to 10 cm. or more for some cases of a negative pressure in the gas bottle just before starting, and to take care that the bulb at the top of the negative stem of the manometer is large enough. Another fairly common physiological peculiarity is that the restoration to health of a person accustomed to severe illness may result in a disinclination to continue the refills of gas for a reasonable time. Such carelessness simply courts relapse, disaster, and death. Fluid in the chest may usually be localized by percussion, X-ray examination, to a small extent by the sensations of the patient, and especially by noticing the peculiar metallic, ringing nature of the splash when the fluid is within the chest as compared with the duller resonance to the ear, applied by stethoscope or held close to the patient when shaken, if the fluid is only a stomach splash. It is customary to keep pressures rather higher in cases having fluid than in those who do not have it. It is a good thing not to interfere with fluid unless obliged to do so through the chest becoming very full or for some similar reason. But both these rules can be followed too closely in the late stages of treatment. During the fourth year after the initial induction, in cases of fluid in which an effective pneumothorax has been produced, it is as well sometimes not to be too readily deterred from continuing the treatment by such difficulties as fluid getting into the gas needle or pus flakes into the fluid needle. The remedy of each of these troubles is obviously withdrawal of fluid and reduction of pleural pressures thereby before attempting to give a refill of gas in the one case, and the use of a larger bored needle or trocar in the other. It is advisable if one has to resort to artificial pneumothorax to keep it up for at least three years. Under the following conditions an occasional injection should be given for four years: (1) if the patient is over thirty-three years of age and has lost the resiliency and recuperative powers of youth; (2) if the compressed lung was a fairly useless one before the initial injection, and if, in addition, it was producing chronic poisoning; (3) if things are going well during the maintenance of the compression. Compression may have to be maintained indefinitely either because the patient's state is more comfortable and he feels more sure of himself with periodic

refills, or because the compressed lung does not re-expand. No hard and fast rules can be laid down regarding the spacing of doses in the late stages of treatment, nor respecting the pressures.

Safeguarding The Weak Heart.

The sufferer from chronic heart disease needs constant attention to his digestion and nutrition. An attack of indigestion or a slight "falling off" in the nutrition may so increase the burden on an hypertrophied heart that its compensation may be lost forever. At the first sign, therefore, of digestive trouble or Glycerine Tonic Comp. should be administered in usual dosage. Its therapeutic action is promptly manifested, and the effect of this dependable tonic in restoring to normal activity, reduces without delay the stress under which a weak and defective heart may otherwise be forced to labor.

In addition to the important service it thus renders by stimulating vital functions throughout the body, Gray's Tonic Comp. acts directly on the heart, imparting tone to the cardiac muscle and aiding and supporting its action.

To sum up the effect of Gray's Tonic Comp. in the treatment of cardiac patients, it is evident that it not only increases the power of the heart, but materially decreases the "load" it has to carry.

Hernia Across the Lesser Sac of the Peritoneum.

—Pringle (Glasgow Medical Journal) states that these herniae may be divided into two main types, viz.: (1) Hernia through the foramen of Winslow, and (2) hernia through an abnormal opening. The abnormal opening may be situated: (a) in the mesocolon, in which case it would appear to be most frequently placed within the vascular arch of the middle and left colic arteries, or (b) the opening may be in some part of the omentum. If the bowel passes beneath the colic arch it may (a) remain in the lesser sac and present either above or below the stomach, or (b) may escape again into the general peritoneal sac above the stomach, "gastro-hepatic" type, or below the stomach, "gastro-colic" type. In the majority of cases of hernia through the foramen of Winslow that are recorded, a comparatively short length of bowel was herniated. The larger herniae seem to have presented beneath the gastro-hepatic omentum, and in Treves' case the cecum and vermiform appendix burst through that structure.

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The next annual meeting of the North Carolina Medical Society will be held in Charlotte, N. C., on the third Tuesday of next April.

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Literature on application.

Practice and Teaching of Orthopedic Surgery.—Stiles, in The London Lancet, speaking on this matter at the recent clinical meeting of the British Medical Association, said that all surgery was more or less reconstructive. The difference between reconstruction in orthopedics and in general surgery was that in the latter, and especially in abdominal cases, it concerned involuntary muscle. He hoped that orthopedics would be made a part of general surgery, that the practice and teaching would be reorganized in general hospitals, and that in them there would be team work. Progress had been made in orthopedic surgery because of team work by young men with receptive minds, new problems to face and imagination. The writer hoped that other large schools would follow Edinburgh and institute lectureships in orthopedic surgery. Referring to flail joints, he said that if heavy massage did not light up inflammation about the joint it was safe to operate. The author made a practice of putting the limb up in plaster on the operating table in the position which he wished it to occupy. A flare-up did not matter if ankylosis was the objective.

SOUTHERN MEDICAL SOCIETIES



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November 11-14, 1919.
Seale Harris, M. D., Sec.,
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Lewellys F. Barker, Pres.,
Baltimore, Md.

SOUTH CAROLINA MEDICAL ASSOCIATION

Annual Meeting at Florence, S. C.
April 15-16, 1919.
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Seneca, S. C.
James A. Hayne, M. D., Pres.,
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October, 1919.
Paulus A. Irving, M. D., Sec.,
Farmville, Va.
Ennon G. Williams, M. D., Pres.,
Richmond, Va.

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April 21, 1919.
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Isaac L. Watkins, M. D., Pres.,
Montgomery, Ala.

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Annual Meeting at Nashville.
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349 Doctors' Bldg., Nashville, Tenn.
Richmond McKinney, M. D., Pres.,
Memphis, Tenn.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Annual Meeting at Hattiesburg
(Date not decided) 1919
T. M. Dye, M. D., Sec.,
Clarksdale, Miss.
W. S. Leathers, M. D., Pres.,
University, Miss.

LOUISIANA STATE MEDICAL SOCIETY

Annual Meeting at Shreveport, La.,
April 8-10, 1919.
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New Orleans, La.
W. H. Knolles, M. D., Pres.,
New Orleans, La.

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Benj. K. Hays, M. D., Sec.,
Oxford, N. C.
Carl V. Reynolds, M. D., Pres.,
Asheville, N. C.

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February, 19-20, 1920
Dr. R. C. Bryant, Pres.,
Richmond, Va.
Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

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Annual Meeting at Waco, Texas,
May 13-15, 1919.
H. Taylor, M. D., Sec.,
Fort Worth, Texas.
S. P. Rice, M. D., Pres.
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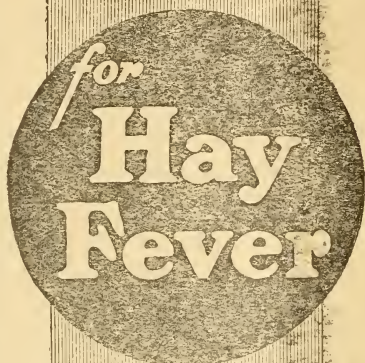
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(Date not decided)
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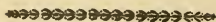
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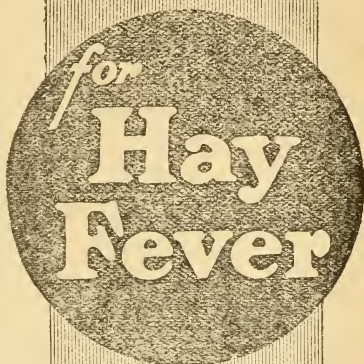
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Armour's Sterilized Catgut Ligatures are offered in standard (60 inch) and emergency lengths (20 inch) plain and chromic.

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May we send a bottle of Listerine to your address, Doctor, for your observation and use?

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ST. LOUIS, MO., U. S. A.

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- Bio. 632. Three bulbs ($\frac{1}{2}$ mil, 1 mil, $1\frac{1}{2}$ mils),
one prophylactic treatment.
- Bio. 633. Three syringes ($\frac{1}{2}$ mil, 1 mil, $1\frac{1}{2}$ mils).
- Bio. 634. One 5-mil vial.
- Bio. 635. One 20-mil vial.

We commend this vaccine to the consideration of physicians.

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VOLUME 80
NUMBER 4

Charlotte, N. C., October, 1919

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DOCTORS SHOULD SPECIFY

In a paper on Corpus Luteum in the New York Medical Journal, Dr. Sajous states:

"The two most important prerequisites to success in the use of the drug appear to be:

"1. The selection of a preparation made exclusively from the corpora lutea of pregnant animals, and

"2. Due attention to the fact that the action of the drug is frequently slow in asserting itself and that the drug should be given up only when thorough trial has demonstrated its lack of efficiency."

Corpus Luteum (Armour is made from true substance. The glands are gathered in our abattoirs and we know what we are using.

Corpus Luteum (Armour) is supplied in 2-grain capsules, bottles of 50; 5-grain capsules, bottles of 50; 2-grain tablets, bottles of 100.

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Pituitary Liquid—
is physiologically
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is free from pre-
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1 c. c. ampoules,
boxes of six.

Thromboplastin
solution, 25 c. c.
vials.

Thyroids—

Standardized.
Powder; Tablets,
2 gr., 1 gr., $\frac{1}{2}$ gr.,
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Pineal Substance—

Powder and Tab-
lets, 1-20 grain.

Parathyroids—

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lets, 1-20 grain.

Pituitary, Anterior—

Powder and Tab-
lets, 2 grain.

Pituitary, Posterior—

Powder and Tab-
lets, 1-10 grain.

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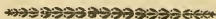
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Doctor:-

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Extract of Red Bone Marrow (Armour) is hematogenetic and is prepared for that kind of cases. Extract of Red Bone Marrow is entirely free from alcohol. It is palatable and when given well diluted with cold water is easily appropriated.

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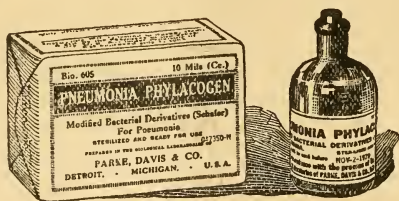
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in the treatment of

Influenza

DURING the winter of 1918-19 Pneumonia Phylacogen was extensively used in influenza for the prevention and treatment of the complicating pneumonia. It had a pronounced effect, not only in the pneumonic cases, but also in cutting short the influenzal attack.

In one large city it became a routine measure to treat all influenza cases, on the first visit, with Pneumonia Phylacogen. Not only did improvement follow, but in a great majority of the cases pneumonia did not develop.

Technique

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Bio. 605. Bulbs of 10 mils, one in a package.

Bio. 607. Bulbs of 1 mil, five in a package.

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Thromboplastin Solution (Armour) is a specific hemostatic and is made from the brain substance of Kosher killed cattle. This brain tissue of cattle killed according to Mosaic law is uninjured and by the Armour process this "principle" which causes coagulation is extracted and supplied to the medical profession in standardized and sterilized form.

Thromboplastin Solution (Armour) is useful in the treatment of hemorrhage especially that from oozing surface, scar tissue and the nose and throat.

25 c. c. vials, in dated packages.

Pituitary Liquid (Armour) is the most trustworthy solution of the Posterior Pituitary Substance. It is free from preservatives and is standardized physiologically by the Roth method. $\frac{1}{2}$ c. c. and 1 c. c. ampoules.

Thyroids (Armour) runs uniformly 0.2 per cent organic iodine in Thyroid combination. Thyroid Tablets (Armour) $\frac{1}{4}$, $\frac{1}{2}$, 1 and 2 grain. When Thyroids is indicated specify Armour's.

We offer all the endocrine gland preparations in powder and tablets. All drying of the glands is done in vacuum ovens at a low temperature. This insures uninjured therapeutic value.

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Asheville, N. C.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

Annual Meeting at Winston-Salem, N. C.
February, 19-20, 1920
Dr. R. C. Bryant, Pres.,
Richmond, Va.
Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

STATE MEDICAL ASSOCIATION OF TEXAS

Annual Meeting at Waco, Texas,
May 13-15, 1919.
H. Taylor, M. D., Sec.,
Fort Worth, Texas.
S. P. Rice, M. D., Pres.
Martin, Texas.

AMERICAN MEDICAL EDITORS' ASSOCIATION

Annual Meeting at New Orleans
June, 1920.
J. MacDonald, Jr., M. D., Sec.,
92 Williams St., New York.
Seale Harris, M. D.,—President.
Birmingham, Ala.

FLORIDA MEDICAL ASSOCIATION

Annual Meeting at Miami, Fla.
(Date not decided)
G. E. Henson, M. D., Sec.,
Jacksonville, Fla.
Frederick J. Walter, M. D., Pres.,
Daytona, Fla.

MEDICAL ASSOCIATION OF GEORGIA

Annual Meeting at Atlanta, Ga.
April 16-18, 1919.
J. W. Palmer, M. D., Pres.,
Ailey, Ga.
W. C. Lyle, M. D., Sec.,
Atlanta, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Ashland, Ky.,
(Date Not Decided) 1919.
Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.
J. S. Lock, M. D., Pres.
Maysville, Ky.

Influenza and Pneumonia

PROPHYLAXIS: Dr. E. C. Rosenow, of the Mayo Clinic, read a paper before the American Medical Association at the last annual meeting in which he reported on the use of a prophylactic vaccine in the influenza epidemic of 1918-1919. There was a total of 100,000 cases, with 300,000 controls. He asserted that the incidence of the disease was three times as great in the unvaccinated persons as in the vaccinated, and the mortality five times as great.

Parke, Davis & Company's Influenza-Pneumonia Vaccine is prepared in accordance with the original formula and method of Dr. Rosenow. It is administered in three injections, at intervals of six or seven days.

Influenza-Pneumonia Vaccine (Prophylactic)

- Bio. 632. Three bulbs in a package.
- Bio. 633. Three syringes in a package.
- Bio. 634. Rubber-stoppered vials containing five mils.
- Bio. 635. Rubber-stoppered vials containing twenty mils.

TREATMENT: Physicians who used Pneumonia Phylacogen last winter as a routine measure in the treatment of influenza gave an initial injection of 16 minims. The second day the dose was increased to 32 minims, the third day to 48 minims, and so on until convalescence was established.

When pneumonia had already developed, 16 minims of Pneumonia Phylacogen was administered immediately. Twelve hours later 32 minims was injected, and the dose was gradually increased every twelve hours until the critical period had been passed.

Pneumonia Phylacogen

- Bio. 605. Bulbs of ten mils, one in a package.
- Bio. 607. Bulbs of one mil, five in a package.

Send for our booklet, "Prophylaxis and Treatment of Influenzal Pneumonia."

Parke, Davis & Company

DETROIT

